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WESTERN INDIA.

REPORTS

ADDRESSED TO

THE CHAMBERS OF COMMERCE

OF

Manchester, Liverpool, Blackburn, and Glasgow,

BY THEIR COMMISSIONER,

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1853.

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WESTERN INDIA.

REPORTS

ADDRESSED TO

THE CHAMBERS OF COMMERCE

OF

Manchester, Liverpool, Blackburn, and Glasgow,

BY THEIR COMMISSIONER,

THE LATE ALEXANDER MACKAY, Esq.

EDITED BY JAMES ROBERTSON, ESQ.

With a Preface

BY THOMAS BAZLEY, Esq.

PRESIDENT OF THE MANCHESTER CHAMBER OF COMMERCE, ETC.

LONDON:

NATHANIEL COOKE, MILFORD HOUSE, STRAND.

1853.

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PREFACE.

The commercial relations between the British East Indies and Great Britain have occupied—from the period when the English first became settlers in India to the present moment—the anxious consideration of the independent mercantile community of this country, and also of those sound statesmen who foresaw that exclusive privileges, obtained by any body of men, would ultimately prove to be both unwise and impolitic.

No new-born zeal has recently induced the Manchester Chamber of Commerce to seek the development of the resources of India. The members of that body have at all times been desirous of promoting a just system of commercial intercourse with that great dependency; and upwards of thirty years ago they began to claim the redress of grievances which had pressed injuriously upon the interests of India and Britain. Commercially, India had been doomed to double injustice: a false policy had given a monopoly of trade, commerce, and government in India to a company rendered powerful chiefly by the protective decrees of the British Parliament. The general colonial policy of Great Britain was highly restrictive and obstructive; and a conflict arose between protected parties, who already had thus a foretaste of the retributive correction that awaited the unjust legislation on which

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commerce was then conducted. Against competition with foreign countries the East Indies were amply protected; but as against the British West Indies, so far from any protection being established, the latter possessed high discriminating duties, which greatly retarded the introduction of the products of the East Indies into the home markets of England. Alive to the fairness of equal burdens, the merchants of Manchester assisted to remove the partial and oppressive duties which gave to the West Indies undue advantages, at the cost of the East Indies and of the people of the United Kingdom; and by vigorous efforts on the part of the commercial community generally, the colonial fiscal system assumed some semblance to even-handed justice. With the commercial monopoly, however, of the East India Company, the Manchester Chamber of Commerce never ceased to struggle, by opposing the potent claims of the industrious at home to the unjust pretensions of those who held a surreptitious sympathy with the people whom they misgoverned, and whose solid interests they neglected. Mere selfish interests and objects have not actuated the opponents of monopoly; but with the growing intelligence of the present age has been associated the deep conviction, that just government alone can promote the happiness and prosperity of any people, and that only with the peaceful pursuits of a rightly-regulated community can thriving commerce be identified. An enlightened experience has taught the merchant and manufacturer that the administration of justice, the spread of civilisation, and the diffusion of Christianity, are objects exceeding in importance the accumulation of wealth; but that even those

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occupations which are pursued for pecuniary purposes can only be effectively exercised where order prevails, and the just rights of men and of property are recognised. India has not been regarded as a mere field for the cultivation of cotton, sugar, or indigo, by the merchants of Lancashire; but the true and broad interests of that vast dependency have been wisely and energetically advocated by them, as the following extract from the prayer of a general Manchester petition, supported by the authorities of the place, will clearly prove; though it is humiliating to conceive that the subjects of one portion of the British empire have had occasion to plead on behalf of other portions of their fellow-subjects, for the fundamental elements of social advancement and progress:—"That at the earliest practicable period the trade to the interior of India and China may be thrown open, the monopoly in tea cease, the right to proceed to and settle in India be materially enlarged, and the power of banishment, without trial and conviction, for some unknown offence, be put an end to; and further, that inquiry be instituted into the present condition of the countries now subject to the British Crown within the limits of the East India Company's charter, in order that such measures may be adopted as shall most speedily develop the native resources of those regions, and most effectually promote the permanent welfare of their inhabitants."

The East India Company and their adherents predicted that, if they were deprived of their trading monopoly, India would be a lost portion of the British empire; and some unwise partisans declared, that to grant free commercial intercourse with the East Indies would not,

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in the least degree, promote or extend the commerce of India with the civilised world. Happily these dark and interested forebodings have not been realised, but, on the contrary, beneficial results have arisen from the removal of those impediments to improvement. Undoubtedly, if there had not proceeded from the thinking people of this country the demand that, to the extent obtained, Indian commerce should be emancipated, and the liberty of the British subject respected, our distant empire would either have fallen, or have been perpetuated in a condition more alarming and unproductive than it is even in its present state. Thanks to the efforts which were made, the legislature, by giving only comparative freedom to India, gave a new impulse to its commerce, and the partial good thereby secured has become a pledge that future judicious changes will be still more eminently beneficial.

Whatever may be the assumptions of any governing power, there is an infallible test which may be applied to ascertain the advantages which its rule confers; and unless material benefits, to the people governed, be the visible and palpable fruits of the government, dissatisfaction will be the result, and an unsound and unwise system may be presumed to exist. Left to itself, the East India Company has not well and wisely governed the territory which it holds. Where are the fruits of an enlightened government in India? Are the people there industrious, happy, and contented? And is material prosperity indicating the success which attends honest labour under a wise rule? Do the courts of law secure impartial justice to the wronged and innocent? Have public works been founded for the convenience and comfort of all, as monuments of

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the beneficence of the rulers, or as proofs that the accumulations of capital and industry have been invested to promote present and future progress and improvement? In India such imaginary evidences are fictions. Docks, quays, common roads, railroads, canals, and the ministering agents of civilisation are almost unknown. The peasantry of India are depressed, if not degraded; and the agriculture of the country is grossly neglected. By the evidence of a faithful witness, the state of feeling of the native cultivator is thus described: "If we improve the land, you will raise the rent: how do we know that you will leave us any more than you do now, and why should we go to any more trouble for you?"

From 1822 to the present time, the proceedings of the Manchester Chamber of Commerce record remonstrances against the system of economical misrule in India. That cotton might be grown in larger quantities and of better qualities than heretofore, has been avowed both by the advocates and the opponents of the East India Company; yet no important progress has been made in supplying more extensively this most useful raw material: not more than one-tenth part in quantity of that article, the produce of India, being now consumed in Great Britain; and so miserable is the quality, that its value forms not more than one-twentieth part of the sum paid for the whole consumption of the country. Under the resident direction of Lord Dalhousie, hopes were entertained that the cultivation of cotton would be promoted; but the same withering influence which has previously prevented its extended supplies has prevailed even under his auspices. India was an extensive cotton-growing country before America knew

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the plant. To these two countries the railway-system became equally known. Now America holds or has a prospect of possessing 30,000 miles of railroads, whilst India has not more than completed thirty miles. With a population not exceeding 25 millions of people, America is taking of British manufactures about 20 millions sterling in the year; but India, with 150 millions of people, has scarcely received eight millions of exports from this source.

Having clearly and unmistakeably seen the tendencies of the system pursued in the East Indies, and having in vain appealed to the Company and suggested remedies for the evils existing there, only a final alternative appeared to be left,—that of seeking directly from Parliament the means of placing before the legislature such unquestionable evidence, as would form a sound basis on which to found the future direction of the affairs of that country. Much to the honour of the members for Manchester, Indian interests were ably advocated by them in the House of Commons; and in support of the views entertained by their constituents, Mr. Bright moved that a special Royal Commission might be appointed to proceed to India, and there investigate into the causes which kept it in a state unsatisfactory and comparatively unproductive. This most judicious motion had the cordial approbation of the Chamber of Commerce, but the counsels of the timid and the interested prevailed in the legislature; and to India was denied an opportunity of telling for herself her grievances, and of directly pleading for the redress of her known wrongs. Thus here, again, were the true friends of India disappointed and baffled.

Another charter for the future government of India

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had to be granted or withheld; but the spirit prevailing in our constitutional courts seemed to be silenced, the House of Commons being impelled, by an influence opposed to investigation and to direct evidence, to resist the claims of 150,000,000 of people to be heard by commissioners of the crown at the bar of the House, though the interested statements of the trading governors were received almost without question. Indignant at the contumely bestowed upon the people of India, and upon the commerce and industry of Britain, the Chambers of Commerce of Manchester, Liverpool, Glasgow, and Blackburn, determined to send a competent individual as their representative commissioner, to investigate in person into the impeding causes which retarded the improvement of India, and which, in particular, prevented the extension of the cultivation of cotton. A gentleman of honour, and of the highest personal respectability, was selected to engage in the duties of the proposed mission; and he was instructed to elicit the truth without fear or favour, and to send to this country only such reports of the condition of India as could be implicitly relied on. Having then appointed Mr. Mackay to investigate the obstacles which have impeded the progress of the industry of India, he soon sailed for Bombay to enter upon the duties of his mission. He duly and safely arrived at Bombay, where he received from the directors of the chamber of commerce of that city, and from the principal merchants and other residents, most important information, and he entered upon his journey to the fields of Indian agriculture under the most promising circumstances. In the name of the commercial community of this country, it is only an act of common gratitude to

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record the attention bestowed upon Mr. Mackay by those in India who welcomed his arrival among them, and who cheerfully and kindly promoted his object. The following reports afford ample evidence that he faithfully discharged his duty; and from their tone and contents it is most probable, that if he could have been spared to have entirely completed all his intended investigations, there would have resulted from his labours revelations beyond the anticipations of his employers.

Unfortunately Mr. Mackay had a weak constitution, and having contracted organic disease before he left this country, his health under the debilitating climate of India totally failed; but not before he had, to a very great extent, executed his trust. On finding that his general symptoms indicated a fatal termination, he proceeded, after a sojourn of about a year in India, to return home, and embarked for that purpose. When he went on shipboard he was in the most delicate and declining state of health; and instead of being improved by sea-breezes, his powers continued to sink, till finally death took him "to that bourne whence no traveller returns." Mr. Mackay's death was a source of grief to his friends on board the vessel, to those in India, and in Great Britain; but to those who had induced him to leave his native land to promote the good of India, was added, beyond that grief, the deep disappointment that a life employed and ended in honourable usefulness could no longer benefit his fellow-men. Fortunately he was accompanied on his homeward voyage by gentlemen who sympathised with him, who ministered as far as possible to his comfort, and who took especial care of his papers,

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his reports having preceded him. To the personal merits of Mr. Mackay, to his truthfulness and untiring industry, a higher tribute of praise is due than could with propriety be introduced into a work of commercial and political elucidation. That India is a country of vast resources, is corroborated by Mr. Mackay: that it abounds in the elements of usefulness and prosperity to itself, that it has the power of yielding staple productions capable of supplying the industry of Great Britain with raw materials for the profitable employment of labour, and with many articles for domestic consumption, all of which would form payment for home manufactures; but that it is the victim of misrule and of patronage cannot, under the existing state of things, be too often reiterated.

The Reports of the late Mr. Mackay are, therefore, now commended to his countrymen as beneficial legacies, which, if accepted and acted upon, may become the sources of national wealth, and the enduring monitors of a people who still remain in comparative misery and in the darkness of ignorance, and whose territory is a reproach from its unproductiveness. Legislation has not yet provided remedies for the evils of India. During the last session of parliament, it is true that another bill for the rule of India was passed, and the Charter of the East India Company was to some extent modified, but renewed. It is feared that the little interest which the natives of India have accorded to them by that bill, in the progress and welfare of that territory, will prevent the exercise of talents and labours which might certainly, if exerted, tend to advance them and their soil in a career of solid and lasting improvement. It would be unjust to

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withhold from the bill of the last session the transitory character which it deserves. It provides for constant agitation in Indian affairs. The mercantile community see not in that bill any adequate provision for the encouragement of agricultural productions; nor do they discover that the cultivation of cotton can be largely entered upon from any facilities being provided, or rather by the withdrawal of obstacles which have hitherto prevented the extended growth of it; and therefore, as increased returns for manufactured exports are not yet visible in the future, the trade between Great Britain and the East Indies must continue to languish. As the natives of India are scarcely recognised in the present governing scheme of their country, their apathy is retained and deliberately provided for. Leadenhall Street and Cannon Row still exist as two rival and inharmonious agents for promoting delay and complicating the dispatch of public business. But the governing principle for India is so far left open, and apparently undecided, that hereafter the business of parliament will probably be annually embarrassed by the large question of "Justice to India" being necessarily debated.

Taking practical results as the tests of good government, the administration of the affairs of India cannot be regarded as either beneficial to the people governed or honourable to their rulers. Instead of the evidences of peaceful progress and industry abounding, neglect is every where apparent; and amid the destitution produced by constant wars and accessions of territory, the governing power only displays its disregard of the interests of the people in its old dominion, whilst that continually increasing territory, forming a new and extending dominion,

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engrosses life, time, and wealth, which would be more advantageously applied in ruling with justice and discretion those who have long been dependent on British rule and protection.

Whether an imperial government shall administer the affairs of India, aided by native agency, or the ruling power shall continue to be delegated to a joint-stock proprietary, the people of Great Britain will demand that substantial justice shall be done to that dependency,—that British laws and language shall not be the means of degradation to any portion of their mighty empire; but that with the government of India, under whatever name or auspices, shall be identified the cause of civilisation, of justice, and of Christianity. No honest government need perform the duties of its citizens; for the latter, unfettered under a rule which secures inviolate the rights of life and of property, will inevitably promote their own interest and the prosperity of their country. In India the rulers need not be themselves growers of cotton or cultivators of the soil; but they should at least "stand out of the sunshine" of their people, that the gifts of Providence may uninterruptedly be acquired by those who industriously seek them. Surely the rulers of the British nation have not yet to learn that good government, established on the immutable principles of justice, is the only foundation on which to rest the prosperity of British subjects, either in the temperate or torrid zone.

THOMAS BAZLEY,
President of the Chamber of Commerce, Manchester.

HAYESLEIGH, MANCHESTER, *October* 1853.

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EDITOR'S PREFACE.

The sudden death of the late Mr. Alexander Mackay rendered it necessary that his papers should undergo revision before being put into the hands of the public. This task the Editor was induced to undertake at the suggestion of the Manchester Chamber of Commerce, with a view to the publication of such of them as related to his mission to India.

Mr. Mackay had transmitted nearly the whole of the following Reports from India, at intervals extending over a period of about twelve months. They were prepared at a time when he was much occupied with engagements and correspondence connected with his mission, and the last of them were written while he was in a declining state of health. It will not, therefore, surprise any one to learn, that in their original state they are somewhat diffuse,—a fault which, had the author lived, he would have been careful to correct. This he intimates in one of his last letters, in which he says, "To remedy this" (the length of the Reports), "and to bring them within practicable compass, I have begun a General Report upon the whole Presidency."

In accordance, then, with the intentions of the author, the Editor has ventured to compress the following Reports within more moderate compass, by condensing such passages as seemed to be unnecessarily amplified. In all cases, however, where such alterations have been made, care has been taken that they do not injure the author's meaning, or affect his line of argument.

Of the General Report named above, only a few pages were written. This is the more to be regretted, because this Report was intended to embrace the result of his inquiries in the pro-

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vinces of Candeish and Berar,—as large as any, if not the largest cotton-producing fields in India.* He also intimates in one of his letters, that the same Report would contain his observations on the "Administration of Justice," and on the "Condition and Character of the People." No trace of his views on these branches of his subject has been found among his papers, and it is therefore believed they have not been separately recorded.

There are still in the Editor's possession a number of papers relating to the provinces of Candeish and Berar, a summary of which, on account of the importance of those provinces as cotton-growing fields, it was at one time thought desirable to give in an appendix. But on their further examination, they were found to be from correspondents in those provinces, in reply to queries addressed to them by Mr. Mackay. As there are no means of knowing what reliance is to be placed on the information thus afforded, nor of the value attached to them by the author, the Editor would not consider himself at liberty to introduce even an abstract of their contents into the same volume with the Reports. It may, however, be mentioned that, in connexion with those provinces, they entirely corroborate the statements made in the Reports on Guzerat and the Southern Mahratta Country.

It is to be regretted that these Reports were not published in the early part of the year, or at all events before the "India Government Bill" was carried in Parliament. This delay arose from unavoidable circumstances, to which it is not now necessary to make further allusion.

After having carefully examined Mr. Mackay's papers, the Editor may be permitted to refer to the great loss which the cause of Indian reform has suffered from his premature death. Had the state of his health permitted him to complete his inquiries, not merely in the presidency of Bombay—to which his mission was more directly applicable—but also in those of Calcutta and Madras, and had his life been spared until now, it

* See Report of Committee of Commons on Growth of Cotton in India in 1848. Replies to questions 1815, 1822, 4743, and 4850.

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may be inferred, from the mass of information he collected during his brief stay in India, that his knowledge of the state of that country would have been of the utmost value to the Imperial Government. Abuses, now overlooked or concealed, would have been exposed; and profiting by his assistance, a more decided progress would probably have been made in removing some of the many evils under which India now labours.

It is scarcely the duty of the Editor to refer to the contents of the Reports, but he cannot refrain from noticing the decisive evidence they contain respecting the obstacles which impede the extension of the Indian cotton-trade. By reason of oppressive taxation, the cultivators are impoverished, and unable to adopt improved methods of cultivation. They are without the means of adequately irrigating their lands; and the works for that purpose which once existed are, in too many instances, permitted to sink into decay. From the corruption of native officials and others, facilities are given for the adulteration of the cotton during the processes of cleaning and packing. The almost entire absence of roads and bridges hinders its reaching the sea-coast;* and for want of harbours and piers, it can with difficulty be shipped to this or to any other market. So long as these difficulties exist—and very little has yet been done to overcome them—it can scarcely be expected that the supply of cotton from India to this country will increase much in quantity,† or be of a quality fit for general consumption. The same obstacles which thus hinder the development of the cotton trade must prove adverse to the increase of every other, must keep the people in a state of indolence and poverty, and prevent the country from making any advance in wealth or population.

* See Fifth Report on Indian Territories, 1853. Reply to question 8174.

† The imports of Indian cotton into this country in the three years ending 1819 were greater than in any three years previous to 1849. During the last few years our imports have increased in consequence of the high prices which have ruled in this market, and of the unsettled state of that of China.

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The Chambers of Commerce concerned in the appointment of this mission have fully attained the object they had in view, by showing the many abuses which exist in the administration of Indian affairs, hindering the progress and prosperity of the native population, and obstructing the enlargement of their commercial intercourse with this country. The information given to the public, through this and other channels, will compel the Imperial Government to adopt measures to ameliorate the condition of the immense population of India, and to develop the boundless resources of that country; and such measures will not fail to give renewed activity to the commercial enterprise of our countrymen, and will enable them to open up new channels for the employment of their capital and of their industry.

JAMES ROBERTSON.

Manchester, November 1st, 1853.

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ERRATUM.

Page 8, note, correct as follows:

The cotton-crop of America for 1852-3 amounted to 3,262,882 bales, of which 1,736,860 were exported to Great Britain.—Ed.

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Skeleton Map
of the
Bombay Presidency,
Shewing All Made Roads in the
Deccan & Southern Mahratta
Country.

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WESTERN INDIA.

INTRODUCTION.

OBJECT OF THE MISSION TO INDIA—THE CAPACITY OF INDIA TO GROW COTTON—ITS DEPENDENCE ON THE FLUCTUATIONS OF THE AMERICAN MARKET—THE RISE, PROGRESS, AND PROSPECTS OF THE AMERICAN COTTON TRADE—THE POWER OF INDIA TO COMPETE WITH AMERICA—EFFECTS OF RENT IN INDIA—COMPARATIVE VALUE OF GRAIN AND COTTON CROPS IN INDIA—RECAPITULATION.

THE mission to which I have been appointed has for its object, "to inquire into the obstacles which prevent an increased growth of cotton in India; and into any circumstances which may injuriously affect the industrial condition of the cultivators of the soil, more especially within the Presidencies of Bombay and Madras." Although the inquiry thus embraces a very wide range of topics, it is obvious that its chief interest, in the estimation of those who have instituted it, is concentrated upon that branch of it which has reference to the growth and export of cotton. The manufacturers of England have the deepest interest in India in her capacity of a consumer as well as a producer; and as the power to consume is measured by the ability to produce, their object must be to promote, not simply the growth of any particular

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branch of her industry, but her general productive development. It is in subordination to this great object that they naturally take an especial interest in improving the quality and enlarging the supplies of raw cotton from India. Whilst dealing, therefore, with the general subject, I shall pay particular attention to this distinct feature, and assign it that prominency which, for obvious reasons, has already been attached to it.

The inquiry, as regards cotton, resolves itself into two questions for consideration: the capacity of India to produce, and her ability to export. Can she produce cotton in greater quantities than *she can consume*, or than she *now produces?* If so, why are not her exports *greater* and *more regular* than at present? If she has productive powers which have not hitherto been called into play, why do they lie dormant? Is the cause to be attributed to the intervention of circumstances remediable or the reverse; and if so, *what are the circumstances which intervene?*

It does not devolve upon me to prosecute that branch of the inquiry which has reference to the mere capacity of India to produce cotton for export. This proposition has already received the most ample confirmation; and proof is abundant from private and public sources, that it is capable of producing cotton *in greater quantity and of better quality than now:* under public sources I include reports of the Bombay Chamber of Commerce; the Cotton Commission, which sat in Bombay in 1847; and a Committee of the House of Commons, which, on Mr. Bright's motion, sat in 1848.

The substance of the Report of the Committee of the House of Commons is, that India is capable of producing a much larger quantity of cotton of a much better quality than she does now; that she possesses in this respect vast

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resources, which at present, for some reason or other, are lying dormant; and that were these resources only properly developed, she could provide the English manufacturers with a much *larger*, *better*, and *more regular* supply of cotton than heretofore;—a result which would relieve the manufacturing interest from successive embarrassments, consequent upon periodic deficiencies of the raw material; and from those perplexing fluctuations of price, which are the natural result of dependence upon a single source of supply, and which, by their continued recurrence, paralyse, from time to time, the operations of the manufacturer.

After such testimony it is quite unnecessary for me to attempt to re-open a question which may be regarded as set at rest. That this is your opinion is evident from the terms of the resolution specifying the object of my mission to India. I have been sent hither "to inquire into the obstacles which prevent an *increased* growth of cotton in India." The capacity of the country for increased production is here taken for granted,—the only question being, why is such production checked? But a demand exists, and yet the supply is deficient. *A demand, then, existing on the part of England beyond the supplies which she receives*, and *capabilities of production existing on the part of India to a greater extent than are brought into action*, why do not the capabilities of the one meet the wants of the other? In pursuing this, the only question now left for consideration, I shall treat the capacity of India for increased production not as a question for further discussion, but as a settled point of departure from which to enter upon the investigations, the results of which it will be my duty from time to time to report.

But before proceeding to inquire into the obstacles which prevent the steady and progressive extension of the

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Indian export trade in cotton, it may be well to take a rapid glance at the present position of that trade, and at its relations to its great rival interest in America.

The Indian cotton trade has two branches, that to China and that to England. Of the China market, India has still, as regards the raw material, almost the exclusive monopoly; although, for reasons to be presently adverted to, her produce has recently encountered competition even there from the cotton of other countries in a manufactured state. So long as American supplies kept pace, or nearly so, with English demand, China was the main outlet for the surplus cotton crops of India. But China is now daily finding in England, not only a rival market for the raw produce of India, but a market whose demands, fitful and capricious—are exercising a material influence both upon her supplies and prices.

For some time back the available surplus of India for export has not altered much; there being, from year to year, far less change *in the whole amount exported* than in the *direction given to the exports.* At one time the supplies to China were comparatively uniform; but both markets are now unequally supplied, the quantities shipped from year to year to each depending mainly upon the state of demand and prices in England. The elevation of prices in China, consequent upon a large diversion of supplies to England, enables the Indian exporter to meet with less risk the exigencies of a falling market in England. But, on the other hand, high prices in China have led to the introduction of yarn, manufactured in England and America from American cotton, in quantities which materially interferes with the trade in Indian cotton, and subjects it to a sensible competition. It is obvious then to what extent the Chinese branch of the Indian cotton trade is influenced, both as to supplies and prices, by the

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English branch. This must continue until India can accommodate herself to the exigencies of the English market, by enlarging or restricting her gross production according to the variations in the English demand; or until, as regards her cotton, she obtains in England an independent footing. Her distance from England forbids the hope that she can adopt the former alternative, and it remains to be seen whether the adoption of the latter be not within her power.

Such being the relations subsisting between the two great branches of the Indian cotton trade, what is the position of its English branch in reference to other sources of competition? Is that branch of it settled on an independent basis, or is it dependent upon the exigencies of another market, over which that of India has hitherto exercised no material control?

The answer to this question will be anticipated by every one who has paid the slightest attention to the subject.

The quantities of Indian cotton exported to England from year to year have no correspondence with the consumption of the latter country. The supply in the English market from India is merely supplementary to that received from America, and the largest exports from India take place in those years in which there is a deficiency in the American crops. In such years, with a diminished supply in the English market, and with consequent enhanced prices, the Indian exporter finds it most advantageous to increase his exports to England and to diminish those sent to China. This unsatisfactory and irregular state of the Indian cotton trade necessarily renders it precarious, and not unfrequently ruinous, to those engaged in it. And so it must continue until relieved from its present subjection to the vicissitudes of the American

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market. This can only be effected by elevating it to the position of an *independent* and *rival* interest, instead of remaining, as now, *dependent* upon the cotton trade of America and merely supplementary to it. Can it be made so? It is quite clear that it cannot, so long as Indian can only compete with American produce at *uncertain times* and *under particular circumstances*. To make it so, it must be made capable of competing with American produce *at all times* and *under all circumstances*. Can this be effected? If so, the cotton trade of India is not hopeless; if not, it must remain as it is, of but casual advantage to England, and comparatively valueless to India.

But how is the export of Indian cotton to England to be elevated to the position of a rival and independent trade; in other words, how is Indian cotton to secure a *constant* instead of a *casual* footing in the English market? There are, at present, two obstacles in the way,—its price and its quality. It is, in the first place, alleged to be short and inferior in staple; and in the next, to come to market in so filthy a state as to be almost unfit for use, endangering machinery in cleaning it, or imposing on the manufacturer an additional tax for the special adaptation of his machinery to the purpose. Can the price of Indian cotton, then, be permanently lowered; and can its quality be improved, either by improving its staple or producing it cleaner in the English market, or both? There are two ways in which prices may be lowered: either by actually *reducing the cost of production*, the quality of the cotton remaining the same; or by *improving the quality*, prices remaining the same. But if, whilst the cost of production can be actually lowered, the quality can also be improved, a double reduction, an actual and a virtual one, will take place in prices. At all events, no great or permanent enhancement of the Indian cotton trade to England can be

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effected, until Indian cotton can be laid down in Liverpool at lower remunerative prices than now; or until, by improving its quality, either as regards staple or cleanness, or both, the manufacturer can afford to pay a price for it, which will more nearly approximate than now to the prices usually paid for American produce.

The question, then, on the satisfactory solution of which hangs the fate of the Indian cotton trade to England, is, whether Indian cotton can be produced so as to compete with American cotton, *not only when the price of the latter is high, but also when it is low;* and not only so, but *when it is at the lowest?* Nothing short of this will secure for it that independent footing in the English market, which is indispensable to its progressive and permanent development; and if this can be done, the Indian cotton trade, instead of continuing to exhibit the alternate expansions and collapses which now characterise it, would acquire a steadiness and solidity, which, by inspiring those engaged in it with a confidence of which they are now all but destitute, would lead to its speedy and prosperous enlargement. Once in the market *on this footing,* Indian cotton would control American prices, by adding annually to the gross stock of cotton in the market, instead of arriving in varying quantities, as now, merely to fill up an occasional gap in American supplies. It would thus confer a double boon upon the manufacturers, by imparting *steadiness* to prices after *leading to their reduction.*

Can Indian cotton, then, of good quality, be laid down in Liverpool at prices remunerative to all legitimately engaged in the trade, in successful competition with American cotton, not only when prices are high, but also when they are at the lowest point at which cotton can be supplied from America at a profit?

The subject of the Indian cotton trade is so mixed up

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in the public mind with that of America, that it is advisable at the outset to ascertain to what extent they are connected. America is pointed out as a great competitor to be encountered by India, and the resources of the one are constantly contrasted with those of the other. By many this is done to shew that not only is the position of India one *full of difficulty for the present*, but that it is *hopeless for the future*. In tracing how far this opinion is tenable, I shall take a hurried survey of the rise, progress, and prospects of the American cotton trade; premising that, although now contemplating this important subject from a distance, that which I am about to state respecting it will not consist of mere speculations, drawn from hearsay or elicited from books, but will be the result of careful observation pursued upon the spot, during a somewhat protracted personal experience of the cotton-growing districts of America. I have no hesitation in saying at once that, whatever difficulties this examination may shew to lie in her way for the present, there is no reason whatever why, as regards her cotton trade, a desponding view should be taken of the prospective fortunes of India.

The cotton trade of America, gigantic as it is, has attained its present dimensions in the brief space of sixty years. Towards the close of the last century, a few bags of cotton wool reached England from South Carolina, and the present annual consumption by England of American cotton is about a million and a half of bales.* This extraordinary trade has, in its progress, exhibited a double phenomenon, in the rapidity with which both demand and supply have increased together. The supply can scarcely ever be said to have outstripped the demand; for it is rare

* The cotton crop of America for 1852 is fairly estimated at three millions and a quarter of bales, of which nearly 1,800,000 will be sent to England.—Ed.

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to find the one hemisphere producing more than the other has consumed. If the supply has increased with unexampled rapidity, the demand has at least kept up with it; a state of things which, but for other disturbing causes, would have led to steadiness of prices; but whilst supply has never outgrown demand, one of the most striking features in the whole history of the trade has been the constant declension of prices. Although, as America enlarged her production, Europe continued to consume every pound which she produced, the tendency of prices has been uniformly downwards; and although within the last thirty years both demand and supply have increased together about 800 per cent, the price of the raw material has declined about 50 per cent.

It is this, in conjunction with other circumstances, which has latterly thrown such embarrassments in the way of the Indian trade. With American production constantly extending, and American prices constantly on the decline, neither the Indian cultivator nor exporter ever knew with what he had really to contend. No matter to how low a point American prices might drop, they seemed to have in reserve a lower attainable point still. This uncertainty restricted the exertions made in India; and at last those engaged in the cotton trade of that country came to regard America as a rival with powers of competition as exhaustless as they were undefined.

It is interesting to trace this subject, with a view to ascertain the causes which have led to this decline of prices, although the demand has increased, on the average, quite as fast as the supply; and to discover whether prices in America have yet reached their minimum, or whether, the same causes being still at work, they are still on the descending scale. If it should be found that the causes which have hitherto produced the decline are no longer

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in operation, and that prices in America have at length reached their minimum, the problem to be solved for India will be a comparatively easy one, at least so far as the mere point of competition is concerned.

When the cotton cultivation of America commenced, the republic embraced but a slender portion of the immense territory now comprised within her limits. On the south, she was separated by the river St. Mary from the Spanish possessions of Florida, at which time she possessed not a single foot of sea-coast on the Gulf of Mexico, the greater part of which is now hers. To the west she was bounded by the Mississippi, half of the great valley being then a province of France. Her population stretched, in an elongated belt, along the Atlantic sea-board, from the shores of Maine to the borders of Florida; the wilderness beyond the Alleganies, and between them and the Mississippi, being then unpeopled. Indeed the States of Virginia, North Carolina, and Georgia, then stretched back to the Mississippi, comprising within their limits the magnificent territory which has since been erected into the States of Kentucky, Tennessee, Mississippi, and Alabama. It was whilst the republic was thus territorially circumstanced, and her population was thus distributed, that the cultivation of cotton took its rise in the sea-coast districts of Georgia and South Carolina.

Under these circumstances the cultivation of cotton in America followed the law which, as regards the appropriation of soils, the exigencies of demand impose upon all cultivation whatever. The best lands were first appropriated, that is to say, *the best of those then most accessible to settlement and market.* Cultivation increased with demand, and, but for events about to be alluded to, would have gradually extended itself, with the concomitant of enhancing prices, to the inferior lands on the sea-coast.

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With the invention of the saw-gin commences the real era of the cotton trade. Whilst Whitney's invention shewed the almost indefinite extension to which American production might be carried, it also, in conjunction with other circumstances, such as the invention of improved methods of spinning, opened up to Europe an equally indefinite prospect as regards consumption. Extended cultivation was the immediate and necessary consequence, embracing the unoccupied lands nearest the sea, from which it would have but gradually departed, had it not been for the rise and rapid settlement of the west. To the furtherance of this event, so materially affecting the cultivation of cotton, the demand for increased supplies in no little degree contributed. It was not long after the earlier emigrants to the west had settled themselves in the valley of the Ohio, that the steadily increasing demand for cotton induced many to penetrate, in search of more productive lands, from Virginia, Georgia, and the Carolinas, to the banks of the Tennessee and the Alabama. No sooner had the cultivation taken root in the great valley, than the planters on the sea-board felt the pressure of the competition. The great fertility of the western soil caused it to be rapidly occupied, as capable of yielding a much greater return than the sea-board lands to a given expenditure of labour and capital. The course of cultivation, therefore, was an ascending one, rising from *inferior* to *superior* soils; and hence the rapid increase of production and the steady decline of prices which attended it, notwithstanding the equally rapid increase of consumption.

Such being a brief outline of the progress of cotton culture in America, and of the fall of prices which accompanied it, it remains to be seen how far the cotton culture in America is still capable of extension, and how

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far there is a probability, if it continue to extend, that it will be accompanied by a still further reduction of prices.

It is undeniable that the field of American production is yet far from being exhausted. The vast region which extends from the Potomac to the Gulf of Mexico, and from the Atlantic to the Rio Grande, comprehends immense tracts of unoccupied cotton lands differently situated, and of varying degrees of fertility; on all of which, should prices be such as to lead to their absorption, cotton could undoubtedly be produced. In this sense the field of American production is practically illimitable. But the extent to which it can be turned to account depending upon prices, the real question is, how far is it capable of further extension compatible with the maintenance of the minimum prices already reached, or the attainment of prices yet lower?

Unless some extraordinary revolution take place in the whole system of cultivation, *cotton cannot be produced in America at lower prices than those which have been already reached.*

Prices are diminished by increasing the proportion borne by returns to the labour and capital employed in cultivation. This may be effected either by cheapening labour or by applying it to more fertile fields of production. It has been by the adoption of the latter course that supply has so rapidly increased, and prices have so constantly fallen in America. *Can America, then, apply her labour to still more fertile fields of production than those already embraced?*

That she *cannot do this* must be obvious to every one having the slightest practical knowledge of the productive resources of the cotton-growing states. In rising from one variety of soil to another, cotton cultivation has at length embraced within its range the *most productive*

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tracts in the Union, and established itself in the localities *most favourable to its development.* When cotton was first cultivated in Carolina, the resources of the West were unknown; but its capabilities are now well understood. This, at least, is known,—*there are no better cotton-growing lands in the Union* than those in the neighbourhood of the Chatahoochee, in the valleys of the Alabama and the Tombigbee, in the state of Mississippi, and on the banks of the Red River. Those lands are now being cultivated, and it was *in ascending to them* that cultivation was accompanied by that fall in prices which proved the ruin of many of the planters on the seaboard. *No lands of more productive qualities than those are now available for cultivation;* so that from this source of increasing cheapness, viz. the power of applying labour to more productive soils, *no further reduction of prices can be looked for in America.*

If this be so, what prospect is there of a further reduction from diminishing the cost of labour? The rapidity with which the cotton cultivation spread had the effect of raising the value of labour by increasing the demand for it. If this demand continue, its price will not diminish; and as in the Union—even in the Southern States, the most inert and apathetic—there are numerous outlets for the profitable employment of capital and labour, there is but little probability of the value of labour undergoing such a change in the descending scale as will materially affect the price of cotton.

I abstain from considering the effect which may be produced on prices from the adoption of improved methods of cultivation—as improvements in this respect may be as applicable to India as to America—confining myself to such changes as are likely to occur in the latter from circumstances peculiar to itself.

We arrive, then, at the important conclusion, that the

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downward career of prices in America has come to a close. An important step is thus gained, in ascertaining that, in point of prices, India can be put to no greater disadvantages than she has already experienced in grappling with her chief competitor.

The next important point to consider is, *how far cultivation in America is capable of extension at the minimum price which has been reached.* In speaking of the minimum price, I do not mean the lowest price for which cotton has been sold in the market, but the lowest at which it can be sold with a legitimate profit to all concerned in its production and transport. A few years ago prices declined to a point at which the planters unanimously declared that cultivation must cease. This was a *bonâ fide* cry of distress. As cultivation progressed westward, with its concomitant fall of prices, many of the planters of the eastern states were driven from the field of competition, and their lands either wholly abandoned or turned to other purposes; meanwhile their rivals on the newly-reclaimed and better soils were flourishing. Were richer soils still left to be reduced, the latter would themselves share the fate which they entailed upon the former. But they have no such rivalry to fear; and the prices to which cotton fell a few years ago were lower than the legitimate cost *on any of the cotton-growing lands of America.*

At the lowest price, then, at which it has been ascertained that it can be produced at a profit, the cultivation of cotton in America is by no means possessed of that indefinite power of extension which some would assign to it. The richest lands I have already indicated, exclusive of some tracts in Middle Florida, and in some parts of Texas, though the climate of the latter is less favourable. The tracts of superior soil in question are by no means of boundless extent, a large portion of them being already

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cultivated. When they are wholly occupied, cultivation, if it continue to spread, *must extend itself either to the inferior soils in the neighbourhood*, or, which is the same thing, to the equally rich soils which may be found in less favourable climates. It may make its choice throughout the vast area capable of producing cotton in America; *but the prime condition on which it can move a single step in this direction is, if labour will not fall, that prices will rise.*

It appears, then, that whilst India need not fear that she will be subjected to a competition of lower prices in America than those already reached there, the capacity of her great rival to compete with her at the scale of prices already reached, depends on the absorption of a class of lands of *limited* extent.

I have been induced to go at some length into this question, from the extent to which the subject of the Indian cotton trade is necessarily mixed up with that of cotton culture in America. The vast majority of those who doubt the power of India to supply England with cotton in large and regular quantities of acceptable qualities, rest their doubts on the assumed hopeless competition with America to which she is doomed; a competition supposed to be hopeless, both as regards its present severity, and the period to which it is capable of being prolonged. They take it for granted that America is ready, if necessary, to meet any new pressure upon her by descending still lower in the scale of prices; or if not so, that she can at least bid defiance for ever to existing competition by producing cotton, at the lowest prices to which she has descended, *in indefinite quantities and to an indefinite time.* If my data and conclusions be correct, such opinions as these rest not on fact, but on mere speculation. Nor is the interest of these conclusions confined to India; for, if well founded, they must of necessity exercise the

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most important influence upon the future prospects of England as a consumer of the raw material.

Their bearing upon the English market may be best illustrated by considering their effects upon it were America, as regards raw cotton, *the sole source of supply*. Her great powers of production have hitherto enabled her to meet the exigencies of a demand exhibiting unparalleled powers of expansion, not *at steady prices*, but at prices which, with occasional exceptions, *have uniformly tended downwards*. But should the demand continue to increase in the ratio in which it has increased during the last thirty years, America could not long continue to supply it; *except on the condition of a rise in prices*. Such an increase of demand would lead to an extension of cultivation, which would ere long absorb *the whole of the best lands*, a large proportion of which is already cultivated. Inferior soils would then be resorted to, and, as a necessary consequence, this would be attended with a *progressive rise in prices*, the very reverse of that which has hitherto characterised the progress of American cultivation. Under these circumstances, a return again to low prices could not be expected; for as a constantly enlarging demand pushed cultivation to the absorption of the poorest soils, prices, instead of receding or remaining stationary, *would ever tend higher and higher*. Were America, then, the sole source of supply, the prospect before England would be to continue to consume cotton for some time to come at the average of present prices, after which *every decided advance made by her in consumption* would be accompanied by *an increase in the price of the raw material*, to which, having no alternative, she would be compelled to submit.*

* This has been confirmed by the experience of the last two or three years, the average price of cotton having steadily advanced during that time.—Ed.

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It is obvious, therefore, that the interest which England has in multiplying her regular sources of supply, is much deeper and more permanent than any that could be excited by a mere momentary pressure. Apart altogether from the bearing which the question has upon the industrial fortunes of India, its vital importance to England is amply sufficient to justify any amount of national anxiety which it may have occasioned.

But it may be said that, if this view of the prospects of the cotton trade of America be correct, there is no reason to despair of that of India; and that we have only to wait until the tide as regards American cultivation and prices has fairly turned, to allow India to enter the market in successful competition with her rival. But neither India nor England can afford to wait. What England requires is larger supplies without any enhancement of prices; and these she might obtain for some time to come from America, or so long as her superior soils are unexhausted. But there are contingencies connected with the cotton culture in America which render it highly imprudent in England to depend upon her supply any longer than can be avoided. As regards India, if she waited for the juncture referred to, she might then find other rivals in the field, as able as she would be to compete with America under such circumstances. If she would keep this out of the way, her endeavour must be to compete, if possible, with the *superior* soils of America. Her succeeding in this would prevent cultivation in America from returning to the *inferior* soils, and also prevent that revulsion in American prices which must follow when all her superior soils are in cultivation. England would, in that case, receive her stock of cotton from two sources of supply *at the price of cotton produced upon the best soils of America*, instead of, as in the other case, paying for her

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whole stock from both sources the price of cotton raised on *inferior* American soils. Whilst, therefore, England need fear no detriment, India would derive incalculable advantage from such a state of things, for it would put her cotton trade with England upon a footing which would relieve it from its present embarrassing dependence upon the trade of America. Under existing circumstances it would seem hopeless to look for so desirable a change; but the point to be inquired into is, *whether any measures remain to be taken, and if so, what are they, which by relieving the agricultural industry of India from all unnecessary impediments, would enable her successfully to compete with the superior soils of America?* If she can be made to do so, the day may not be far distant when *even Lowell itself* may be indebted for cheap cotton to India.*

Before presenting you with the results of the inquiries in elucidation of the point whether India can be brought to compete with the superior soils of America, on which I am now engaged, I think it right at once to notice an

* I have made no account in what precedes of a point which has, nevertheless, a very important bearing upon the whole subject, the exhaustion to which the best cotton-growing lands now cultivated in America are likely soon to be subjected. There are some tracts of land of comparatively small extent, which, as yet, exhibit no symptoms of diminished powers; but throughout large tracts both of Mississippi and Alabama unequivocal signs are beginning to manifest themselves of the capabilities of the soil having been too unremittingly taxed. If this be so, and should those lands, or a portion of them, have by and by to be more skilfully and expensively cultivated, or permitted to lie idle for years, in order to recover, the events which I have been contemplating will be all the more hastened to their fulfilment.

Another consideration favourable to India is, that prices in America cannot hereafter be much affected by improved modes of transit. In this respect the American planter has already almost every facility which he can desire, whilst India has yet much to expect from this, as from other sources of improvement

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objection, chiefly of a general and abstract kind, entertained by some, whose opinions on this as on other Indian subjects are entitled to no little consideration. It is urged that in India rent exists, whereas in America it does not; and that it is vain to expect India to compete with America, when to the disadvantage of having to pay rent is added the other disadvantage of distance. India, it is said, is a populous country, whence arises a demand for the products of its soil, which, by bringing into cultivation soils of different degrees of fertility, calls rent into existence. It is thus a matter of inevitable necessity in India that rent should accrue, and be paid to somebody, *affecting the cost of production* to a degree which renders it impossible for her to compete with a country whose produce can be brought to market at a reduced price, from the absence of any such element in the cost of producing it. This, as an abstract proposition, seems formidable enough; but the question is, how far has it any just application to the state of things really existing in India? It is quite possible that India is in a position which renders rent inevitable; but it remains to be seen whether she is yet in that position which necessitates the existence of a rent sufficiently onerous to put competition with America out of the question.

Rent in any country is the result of a demand for the products of its soil, which the superior soils alone cannot supply, and which can only be met by reducing to cultivation soils of inferior degrees of fertility. It matters not, so far as the result is concerned, whence this demand arises; whether it spring from a large internal consumption by a population pressing heavily upon surface, or from a large external consumption, calling the different qualities of soils into cultivation for its maintenance and supply. Thus, whilst rent exists in a populous country,

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having a large non-producing class of consumers to supply, it may equally exist in a country with no more people than are necessary to cultivate the land, provided there exists a large foreign demand for the products of the soil. Large exports, in the one case, produce the same result as large internal consumption in the other. Should both concur, the value of rent would be additionally enhanced. No one can pretend for a moment that the exports of India are at all commensurate with her vast surface and the admitted capabilities of her soil. An annual export of about 18,000,000*l*. is but little for a country so vast, so fertile, and so populous as India; and therefore she is wanting, or nearly so, in one of the conditions *necessary* to the creation and maintenance of a high rent. Has she, on the other hand, that excess of population which would equally lead to the existence of such a rent? If she has neither the one nor the other, she cannot be said to be in a position which would justify the existence of a very onerous rent.

That India is a populous country is not to be doubted, but that she is an over-peopled country is quite another proposition. However, such is a general impression in England. We are overwhelmed on hearing of its hundred and fifty millions of people, but we forget that it has an area of more than a third that of Europe. It would appear too, from our more recent and authentic accounts, that the gross population of India has been considerably over-estimated. We have a population about five times as numerous as that of the British Isles inhabiting a territory ten times as large. In other words, population in India does not press with half the severity upon surface with which it presses upon it in Great Britain and Ireland; and so long as the denizens of the forest contest and share the territory with man, the argument built upon over-population vanishes. When, in connexion with this,

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we consider that the fertility of the soil of India is equal, if not greatly superior to that of England; and that the great mass of the population of India consists of practical agriculturists, deriving their subsistence directly from the soil, whilst so large a number of the population of England, consuming without directly producing, and requiring more for their subsistence than the soil produces, have to be supplied from abroad,—we can scarcely avoid the conclusion, that the rent which may arise in India from the pressure of demand upon supply should bear but a small proportion indeed to that existing in a country so differently circumstanced as is England. In fact, were rent in both countries equally left to find that level to which a mutual competition on the part of owners and occupiers would bring it, then, most likely, we should find India more in the category of a *new* than in that of an *old* country.

But there is another aspect in which this question should be viewed. If the aggregate population of India distributed over its whole area gives but about 100 people to the square mile, a result disproportioned to the pressure upon surface in most of the high-rent-paying countries of Europe, so there is that in the general distribution of the population which goes far to render the ascertained *average* pressure of population upon surface an unsafe criterion whereby to judge of the rent which exists or should exist in different parts of the country. In one district we find from 380 to 400 people to the square mile, whereas in another, perhaps contiguous to it, we find less than 70. This disparity may not be considered extraordinary, seeing that something like it is found to exist in our own country. But here the scanty population is found scattered over the infertile tracts, the abundant population concentrating itself upon the rich productive soils; and hence is im-

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parted to arable land a rent-paying value, which is almost uniform throughout the whole country, arable land in Ross-shire paying as high a rent as arable land in Sussex. But the case is vastly different in India. We have the same disparity as regards population, but unaccompanied by the same circumstances. The lands which are waste in India are not always infertile tracts like those which bound the arable straths in the north of Scotland, but they are, in many cases, lands of as high productive powers as any to be found in the country.

Taking India in its vast length and breadth, it is a country having little common to it throughout but its name and its faith. It is a congeries of provinces, having but little social or industrial connexion with each other, and only bound together by the strong arm of the political system which, for the time being, happens to predominate. For all industrial purposes, its different districts are as much isolated from each other as the Peninsula is from England; and hence it would be hazardous to affirm that one part of it should be a high-rent-paying district, because another happens to be so. If we found two countries, conterminous but independent, with soils of equal fertility, but between which little or no intercourse existed, the one having a numerous population and a large export trade, and the other with but a scanty population, with scarcely any foreign demand for its produce, it would be wrong to estimate the rent-paying capabilities of the one from those ascertained to exist in the other. And so with the different districts of India. Although bound together in the same political system, they are, so far as the question of rent *and the circumstances which lead to rent* are concerned, as distinct from each other as if they were separate and independent states. Each district must, in this respect, be judged of by itself, just as in other parts of the world each

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country is so judged of; and if in districts *wanting in the pre-requisites to high rent,* we find high rents, *not to say the highest,* existing, we cannot avoid the conclusion that rents in India are not always left for their adjustment *to the natural operation of the law of rent.*

Admitting, therefore, that India is of necessity a rent-paying country, and that in some districts rents are and must ever be high, it does not follow that, in others differently situated, they should not, if adjusted on fair and equitable principles, be so moderate as to render the question of competition less hopeless than some assume it to be. Now, as regards cotton, it fortunately happens that some of the districts in the latter category are precisely those which either already produce large supplies, or from which the largest and best supplies are ultimately anticipated. Were rents in those districts fixed permanently or for long periods, at comparatively moderate rates, it is questionable whether the culture of cotton in India would labour under any disadvantages, which would not be more than counterbalanced by the disadvantages peculiar to American cultivation, in the shape of high-priced labour and general high cost of production. Besides, in America, the rapid increase of her population, the occupation of her hitherto uncultivated land, and the extension of the cotton cultivation itself, must of necessity give rise to an increasing scale of rents.

In his able work, entitled *The Cotton and Commerce of India,* Mr. Chapman remarks that the question has advanced a step beyond this, inasmuch as India already exports cotton in considerable quantities to England. It is strange enough too that the bulk of the cotton exports of the country should come from those provinces which are proverbial for the high rents which they pay. This, as it seems to imply that India's powers of competition are proof

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against the existence of even high rents, would also seem to furnish an argument for those who assert that the assessment has nothing to do with the question, inasmuch as, instead of checking cultivation and export, the highest rates of assessment have been coincident with the greatest development which either has yet experienced in India. This reminds one of the old argument, that, as England had grown great under the system of restriction, she must necessarily have grown great through that source. If Guzerat furnishes about one-half of the whole cotton exports of India, she does so despite the high assessment with which she has so long been burdened. Her proximity to the coast has counterbalanced the tendencies of the assessment; and all that can be said of her is, that if she now furnishes half the cotton exported to England, under better auspices she would annually send a regular supply to the full extent of her capabilities. Her case, so far from proving the innocuous operation of a higher assessment, only exemplifies the value of facilities for reaching the market. Nor would it seem to be so decisive as to the ability of India to compete with America, notwithstanding existing rents, as Mr. Chapman appears to suppose; for, as already observed, the exports of Guzerat, as of the rest of India, have hitherto been more supplementary to, than in competition with, those of America. Guzerat has hitherto, like the rest of India, competed successfully with only the inferior soils of America; that is to say, she has been enabled to compete when, from shortness of crop, American prices have risen to a point at which cotton could be grown there at a profit on soils of inferior quality; and at which, if continued, the superior soils would have yielded a rent. This, after all, is but a lame and partial competition, which by no means proves the competing powers of India to be independent of the assessment.

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I have dwelt at greater length upon this point than I should otherwise have done, from its obviously important bearing upon the whole question. If it be true that there is something inherent in the very condition of India, which no measures can remove, and which precludes the hope of her ever being able to compete with her rivals, then it would be useless to pursue the discussion any farther. Some believe this without much, if any, investigation; but they do not consider that, although India, as a whole, may be of necessity a rent-paying country, the circumstances of some of its provinces may be such as to render high rents, if payable in them, less a matter of *necessity* than of *regulation*. If this be so as regards the cotton districts, surely the case cannot be so very hopeless. How far it is so, it will be my business hereafter particularly to inquire. It is quite possible that, in a country without a numerous class of proprietors to keep down rents by their competition, the assessment may in no case be found in excess of the natural rent; but it is not probable; and it is not prejudging the case to say, that I am likely to find rents in excess, not only in comparatively wealthy and populous provinces, but also in depopulated and impoverished districts, which, so far from being able to sustain or justify high rents, would, even in populous India, be fitting scenes for "systematic colonisation."

I may also here notice another objection which, having a general bearing upon the whole question, has a particular reference to the assessment. It is urged against those whose object it is to promote the further growth of cotton in India, that, admitting the assessment to be too high, its reduction would not effect that object, inasmuch as in the cotton-growing districts grain is found to be a more profitable crop than cotton. Were the assessment, therefore, lowered, or even extinguished, the growth of cotton would

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not thereby be promoted, for the relative value of the crops would remain unaffected, and grain still be raised in preference to cotton.

Waving, for the moment, the consideration obviously overlooked by those preferring this objection, that if the reduction or removal of the assessment, if too high, *would not alter the relative value of grain to cotton*, it might promote the increased growth of cotton *by stimulating to a larger production both of grain and cotton*, I shall proceed to notice the value of the objection in other points of view. In doing so I shall admit, for the time being, that which is by no means proved, that grain is to the cultivator the more valuable crop of the two, and that a preference must therefore necessarily be shewn to it irrespective of the rate of assessment.

The point is argued as if those who attacked the assessment had no other object than to promote the increased growth of cotton. The promotion of the growth of cotton is but a branch, though a very prominent one, of a much larger question, the general devolopment of the resources of India, in which the manufacturing and commercial community of England have as deep a stake as any other interest in the kingdom. Viewing the matter in its broad and national light, they are directly interested in stimulating, *in any direction*, the industry of India; and to argue that the adoption of a certain course of policy would not have the effect of stimulating it in *one* direction, can furnish no proof of its inefficiency to promote it in *another*. If the argument has any object, it is that of bolstering up the assessment; but that cannot be effected by merely shewing that, by modifying it, you would not increase the proportion borne by the quantity of cotton produced to that of grain, so long as it is not shewn that, without disturbing the proportion between them, you could not thereby stim-

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ulate to an *enlarged production of each.* Would it have this tendency, or would it not?

In some of the most important of the grain, as well as of the cotton-growing districts of India, the "three-field" system prevails,—that is to say, a rotation of crops, embracing three years in its operation, is considered indispensable to the maintenance of the productive qualities of the soil. In some few instances a field is permitted to lie fallow for a season; but this is the rare exception, the general practice being to appropriate one year to cotton, and the other two to different kinds of grain, or to vegetables and grain. If cotton is not produced two years out of the three, it is because its being so would injure the land. Now the evidence on which the objection under review rests is, that in certain districts the description of land usually cultivated with cotton *readily pays the assessment when cultivated with grain;* at least so it is stated to be in the dispatch of the 3d November, 1847, from the Court of Directors to the Government of Bombay, in answer to the dispatch communicating to the court the proceedings of the Bombay Cotton Committee. When the cultivator raises grain, whether any profit is left him or not, he can at all events pay the assessment; but when he produces cotton, so far from his having a profit, he is scarcely in a position to pay his rent. Thus for one year out of the three the cultivator scarcely meets his expenses, and the profits of two years must be taken to find the average of three. It is no wonder that under these circumstances the cultivator, except when stimulated by the prospect of a sudden demand and high prices, will sooner let his land lie fallow, or run the risk of injuring it by a too-frequent repetition of grain crops, than go to the expense and trouble of producing cotton or any other non-paying crop. But the simple question is, cannot the third year be

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made profitable to him as well as the other two? If the assessment be too high, this may be effected by reducing it, when, in addition to the third year being made profitable, the profits of the other two would be increased. With the three years profitable, he would be in a better position than now to accumulate a little capital, with which either to improve his land or to become a purchaser of land,—a great desideratum in India, where improving tenants and resident land-owners are so much wanted. The mistake is in supposing that, in the districts in question, it is necessary, in order to promote the increased growth of cotton, that its cultivation should *supersede* that of grain. Grain may be the most profitable crop when in the course of husbandry it is *most advisable to raise it;* but it cannot be said to be so when, in the course of husbandry, it is *more advisable to raise cotton.* If the cotton crop scarcely enables the cultivator to pay his rent, it obviously *checks* its cultivation; but it is equally evident that the removal of those impediments which now render the crop profitless would *promote* its cultivation. It would do this without superseding in the least the production of grain, as it would only be rendering it worth while to raise cotton *when cotton should be raised,* instead of letting the land lie waste, or injuring it by a too-frequent production of grain. During the cotton year the question is not properly between *cotton* and *grain,* but, as Mr. Chapman has well put it, in the work already referred to, between *cotton* and *nothing;* but if under a high assessment any one of them barely puts him in a position to meet his obligations to government, the production of that crop must necessarily be limited, especially in those districts in which remissions are still given for non-cultivation.

Those who prefer this objection, too, utterly forget to

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estimate the extent to which the value of grain is affected by the price and quantity of the cotton which is produced along with it. In the collectorate of Surat, which is more particularly attended to, the quantity of land under cotton cultivation is very limited, ranging in a series of years from a sixth to a tenth of the whole area under cultivation. But in the neighbouring collectorate of Broach, the quantity of land cultivated with cotton averages from 33 to 40 per cent of the whole cultivated area; so that taking the two collectorates, which are conterminous and in intimate connexion with each other, we have somewhat more than a quarter of the whole cultivated area annually producing cotton. The remaining three quarters are devoted to the production of grains and vegetables of different kinds, the greater portion of which is consumed in the district, the rest finding a market elsewhere, chiefly in Bombay. The area thus devoted to the cultivation of grain produces, with its powers only partially taxed, sufficient to supply every local want, and to meet every existing external demand. To extend the cultivation would only be to glut the market and reduce prices. This again would disable the cultivator from paying the assessment, except in kind, for his ability to meet the government demand depends on the value of his crop. Cases in exemplification of this have already occurred in the annals of Indian finance. A glut in one province has been coincident, in point of time, with a famine in an adjoining one; yet so imperfect has been the intercourse between them, from the want of facilities of intercommunication and other causes, that the superabundance of the one could not be made to minister to the wants of the other. The consequence has been, that in both cases remissions of rent had to be conceded; in the one case because the crops were deficient, and in the other because

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they were superabundant. It thus appears that, as regards its ability to pay the government assessment, *the next greatest calamity that can befall a district to having its crops deficient, is to have them too abundant.* Abundance in such cases is a term having less reference to the productive powers of the soil than to the relation between demand and supply. What enables the land in the district in question readily to pay the assessment when cultivated with grain is, that the supply, as at present regulated, seldom exceeds the local and external demand. But once disturb the existing relation between the two, as may be done by being indifferent to the fate of the cotton crop, simply because the land when cultivated with grain "readily pays the assessment," and the crops, which are more relied upon as the best guarantee for the government rent, may utterly fail to secure it. Government has thus a manifest interest in promoting the growth of cotton in those districts, in order to maintain the value of grain, on which it relies so securely for the payment of the assessment. It can only do this by enabling cotton to be cultivated at a profit when, in the course of husbandry, cotton ought to be cultivated, which it cannot do so long as it proceeds upon the principle that the assessment which the one crop *cannot* pay, the other *can.*

In proof of this, I have already alluded to what has formerly occurred; but I may also adduce by way of example what is occurring during the present year in the collectorate of Kaira. There cotton is grown to so small an extent as scarcely to figure in the resources of the collectorate. Grain is the chief produce, the land being as rich and prolific as any which lies between Ahmedabad and Bombay. Now if grain were a better rent-paying crop than cotton, one would think that the cultivators of Kaira were in a very comfortable position as regards the

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assessment. But the very reverse is the case. The 30th of April is at hand, the day on which closes the financial year, and that on which the last instalment of the assessment is due and payable. The cultivators are quite at a loss to know how they are to meet the demand. Their crops have been abundant, but they have no market; and the surplus left in the collectorate, owing to the want of an external market, necessarily keeps prices ruinously low, as regards all that is sold for internal consumption. Such is the case with the people of Kaira contrasted with that of the ryots of Broach, one-third of whom are engaged in raising cotton, and all of whom are this year able to meet the demands upon them, from the high price of cotton and the correspondingly high price of grain.

But where is the proof that grain is, in itself, a more valuable crop than cotton; or that cotton, if produced with the prospect of a market, could not as readily pay the assessment as grain? In some cases it is assumed to be so without positive data; whilst in others, if true, it only tells against the government for being so. Give cotton fair play, give it a reasonable prospect of a market, and in no part of Guzerat, at least (of which alone as yet I have any personal knowledge), can it be said that grain is a more valuable crop than cotton. It cannot be said to be so in Broach, where, during the past year, nearly 40 per cent of the whole cultivated area produced cotton; but the fact that nine-tenths of the cultivated land in Surat produces grain would seem to shew that it must be so in that collectorate. Why cotton is a more profitless crop in Surat than grain, or rather, why the cultivators are, in the main, driven to raise grain there instead of cotton, it will be my business to shew, when I come to speak more in detail of Guzerat.

To recapitulate:

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1. Admitting that grain is the more valuable crop of the two, and that the preference would therefore always be given it, irrespective of the rate of assessment, when in the proper course of husbandry it could be cultivated to advantage, the reduction of the assessment, if it be too high, would necessarily promote the growth of cotton, not by causing it to supersede the cultivation of grain, but by stimulating the cultivator to produce it to the greatest possible extent, whenever, in the proper course of husbandry, it ought to be produced, by enabling him to produce it at such time with a profit.

2. The alleged high value of grain, which forms the basis of the objection, is, if it exists, the result, to some extent, of the large quantities of cotton already produced along with it preventing supply from so far outstripping demand, local and external, as probably to reduce prices below a rent-paying point: a consideration which shews the direct interest which government has in promoting the growth of cotton, if it would continue to receive from the grain-growing lands the rent which they now so "readily" pay.

3. The fact is not, as I shall hereafter shew, that grain is a more valuable crop than cotton, for it only enables the cultivator more readily to pay the assessment than cotton, when the latter can only be cultivated at extreme disadvantage. Whenever their advantages are equal as regards disposal for consumption, the cotton crop is, on lands capable of producing it, universally resorted to as frequently as possible, as the best rent-paying crop. This is illustrated by the case of Broach, which, during the past year, devoted about 40 per cent of its cultivated area to the production of cotton, and annually devotes at least a third of it to that purpose, the cotton being the source whence the cultivators expect to pay the assessment,

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not only on the cotton, but also on the grain-growing lands.

I have thus, after adverting to the object of my mission, and glancing at the present position of the Indian cotton trade, more particularly with reference to its dependence on that of America, endeavoured to trace the circumstances connected with the American trade which have originated and perpetuated that dependence, in order to ascertain whether it is temporary and casual, and therefore remediable, or whether it is hopeless to expect its emancipation. In doing so, I have traced the progress of the cotton culture in America from the inferior soils of the sea-board to the superior soils of the Mississippi valley, as explanatory of that constant fall in prices which paralysed the operations of the Indian cultivator and exporter, called upon, as they were, to compete with the American cultivator under the most disadvantageous circumstances. I have also endeavoured to shew that the circumstances connected with the American cultivation forbid the inference that its extension will be attended with any further diminution of prices,—an important point gained for India, as she now knows the worst, in this respect, with which she has to contend. It has likewise been my object to shew that, whilst the power of America to produce cotton may be regarded as *practically illimitable*, her power to produce it at present prices is *comparatively limited;* and that the continued extension of American cultivation must necessarily soon be accompanied by a *continued rise in prices*, as the superior soils are exhausted, and soils of inferior degrees of fertility embraced in the cultivation. From this it would appear that American cultivation and prices would soon reach a point at which Indian cotton cultivated under existing disadvantages could regularly compete with them; but as this would only be competing

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with the inferior soils of America, England would then receive her supplies of cotton from the two sources only at the price at which it could be raised at a profit on the inferior soils of one of them. To prevent this, and to enable England to derive her supplies from both India and America at the lowest price at which cotton can be raised in the latter, it is desirable to ascertain whether the cultivation of cotton in India cannot be put upon such a basis as to enable it to compete successfully with the superior soils of America; in which case England will derive her supplies at the lowest price at which it can be raised with a profit in one of them, or at the price at which it can be raised on the superior instead of the inferior soils of America. To ascertain this will be the chief object of my inquiries. I have been led into this preliminary question with a view to obviate the objections of those who tell us that it is hopeless to expect that India can ever or under any circumstances compete on equal terms with America, and whose objections, if well founded, would render useless and nugatory all inquiries into the industrial condition of India. With a similar view, I have examined the grounds on which the argument is based, that competition with America is hopeless, because India is a rent-paying country; an argument which, if well founded as regards the cotton-growing districts, would also render useless any further investigation. In addition to these, I have adverted to the argument of others who endeavour to bolster up the present assessment by alleging that, inasmuch as cotton is a less valuable crop under the present assessment than grain, it would be equally so under a reduced assessment, so that the preference necessarily given in the one case would be continued to it in the other, which would prevent the reduction of the assessment from operating to the promotion

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of the growth of cotton. All these subjects having a general bearing upon the whole question, I deemed it advisable at once to dispose of them in this communication (which I present to you less in the nature of a Report than of a preliminary paper to the reports which are to follow), lest by their frequent recurrence in the prosecution of my inquiries, they should afterwards, by constantly claiming attention, interrupt the plain narrative of facts of which I intend my reports to consist.

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BOOK I.

GUZERAT.

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CHAPTER I.

THE POSITION, AREA, POPULATION, SOIL, AND PRODUCTION OF GUZERAT—EXTENT OF COTTON CULTIVATION—VALUE OF COTTON AND OTHER EXPORTS—PROCESS OF COTTON CULTIVATION—VARIETIES OF COTTON—PREPARATION OF THE SOIL—RYOTS' STOCK IN TRADE—INDIGENOUS AND AMERICAN COTTON—PICKING—STORING—ADULTERATION AT PITS, ETC.—MERITS OF PITS AND SHEDS—WAKHARIA OR NATIVE MONEY-LENDER—CLEANING OF COTTON—COST OF CLEANING—MERITS OF THE GIN AND CHURKA—FRAUDS ON THE BALES IN COURSE OF TRANSFER TO BOMBAY—MODE OF BUSINESS AT BOMBAY—CURE FOR FRAUDS—GOVERNMENT INTERFERENCE—INTRODUCTION OF EUROPEAN CAPITAL AND ENTERPRISE—CONFISCATION OF ADULTERATED COTTON—EUROPEAN INSPECTION—VALUABLE SERVICES OF MR. DAVIES OF BROACH.

I NOW proceed to lay before you, as briefly as the nature of the subject will permit, the results of my inquiries in Guzerat.

In doing so, I shall confine myself to those topics on which I feel somewhat competent to speak; and it will not be arrogating to myself too much to lay claim to some competency as a witness in speaking of Guzerat, after a tour through the province of three months' duration, and comprising, in extent, upwards of eight hundred miles.

The whole of my time, whether in the bungalow or on the road, was devoted to the inquiry; and what I now pro-

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ceed to lay before you is a faithful account of what I have actually seen and heard.

Guzerat consists of the nook of land, on the western side of India, which bends in an amphitheatrical sweep around the Gulf of Cambay, towards which it slopes down upon three sides, as is indicated by the flow of its streams: the Taptee, the Nerbudda, and the Dhadur flowing westward; the Mhye and the Sabermatty southward; and several of the streams of Kattiawar (Guzerat comprising the whole peninsula) eastward into the gulf.

This extensive sweep of territory is neither all British territory nor *cotton-growing land.* But about a fourth of its whole area belongs to the Company, whilst scarcely a moiety of that fourth is devoted or applicable to the culture of cotton. The British collectorates are grouped immediately around the Gulf of Cambay, and, together with the petty native state of that name, comprise almost the whole coast of the gulf, and the mouths of all the principal streams flowing into it. With these exceptions, the rest of Guzerat may be regarded as divided between the *Guicowar*, or head of the native state of Baroda; and the Kattiawar chiefs, numbering upwards of two hundred, and who are tributary, some to the Guicowar, and others to the British government, the latter receiving about seven lacs annually as tribute, and the former upwards of three. The Company's officers now collect the Guicowar's tribute for him, to preserve the tranquillity of the country, which was formerly frequently disturbed by the disputes between that chief and his tributaries.

British Guzerat comprises the four collectorates of Surat, Broach, Kaira, and Ahmedabad. Of the area thus belonging to us, we hold a considerable part as a grant from the Guicowar, in consideration of keeping up a certain force, nominally for his protection, but actually for his

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subjection. We hold only half of what is usually known as Surat, the district having been divided between us and the Guicowar on the breaking up of the Mahratta empire.

The area of British Guzerat is all that can be obtained with certainty, the four collectorates comprising between them an area of 8504 square miles, thus distributed: Ahmedabad, 4402; Surat, 1375; Kaira, about the same; and Broach, 1352; the three last being remarkably uniform in point of size. The population of British Guzerat was, in 1848, about 1,853,000 souls, thus distributed: Ahmedabad, 590,754; Kaira, 566,513; Broach, 262,631; and Surat, 433,260. The whole may now be set down at about 2,000,000. The average pressure of population upon the square mile throughout the whole was, in 1848, 218 persons.

This pressure is, however, most unequally distributed; for whilst in Kaira it was then 412, and in Surat 315, it was in Broach only 194, and in Ahmedabad only 134, to the square mile. At the same time the average throughout the Bombay presidency was only 135.

Guzerat is generally termed the garden of Western India. With the exception of Kattiawar, the surface of which is broken and rugged, and intersected by several rocky ridges of considerable elevation; and of the districts to the eastward of Broach, traversed by the Rajpeepla Hills,—the whole of Guzerat is one extensive plain, comprising many different soils; the chief varieties being the black or cotton soil, and the gorat or light grain-producing soil. On the eastern side of the gulf, the black soil is chiefly confined to the collectorate of Broach, and the few pergunnas of Surat which lie north of the Taptee. The light soil prevails throughout the state of Baroda, the collectorate of Kaira, and some of the northern pergunnas of Ahmedabad, becoming more and more mixed with sand as

you proceed northward from the Mhye. The western and southern pergunnas of Ahmedabad, lying to the western of the gulf, abound in black soil, as do many of the numerous valleys of Kattiawar.

The productions of Guzerat are various, cotton being that of chief interest to the Englishman. Although it is almost exclusively on the black soil that it is raised, that soil is also favourable to the production of a variety of grains, the chief grain-producing soil, however, being the gorat or light soil. Wheat, barjree, jowaree, gram, rice, and a great variety of minor grains, are produced in Guzerat as well as cotton, as are also sugar-cane and tobacco, the latter in great quantities in the district north of the Mhye, and near its mouth.

The cultivation of cotton is carried on both in the native states and the British collectorates, the former contributing about half the whole produce of the province. Its cultivation is, as to extent and distribution, almost coincident with the black soil. The aggregate area under cotton cultivation last year in the British collectorates was 978,988 beegas, or about 460,000 statute acres. It was thus distributed: Ahmedabad, 478,791 beegas; Kaira, 9901; Broach, 417,590; and Surat, 72,706. If we take about the same quantity as under cultivation in the native states, we have about 920,000 acres, or about 1450 square miles actually cultivated.

Little, however, as this may seem, the extent of the cotton cultivation of Guzerat, in point of value, is by no means inconsiderable. The value of the export trade of the province for the five years ending 1849-50 was as follows:

	Rupees.
1845-6	1,70,03,708
1846-7	1,92,69,474

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	Rupees.
1847-8	1,59,33,013
1848-9	1,84,35,740
1849-50	2,22,35,399

During the same years the value of the cotton exported was as follows:

	Rupees.
1845-6	50,78,743
1846-7	83,84,491
1847-8	77,75,722
1848-9	94,43,506
1849-50	1,14,79,642

The cotton exports were thus forty-five per cent of the whole exports of the province, *including those of opium*, which is not a product of Guzerat, and of which the average export from the port of Tankaria alone, during the ten years ending 1847-8, was in value fifty-five lacs of rupees. The average annual value of the opium exported from all the ports of Guzerat during the same period was about sixty-five lacs, which, deducted from the average of the total exports, leaves about 1,20,00,000 rupees as the average annual value of the exports, exclusive of opium. The average annual value of the cotton exported during the five years above mentioned was 84,32,420 rupees; so that, during these five years, the cotton exports of Guzerat were fully seventy per cent of the gross exports of *all the products of the province.*

It is fortunate that the process of cotton cultivation has been already so frequently and so amply described, for space will not permit me to dwell upon it here. The two chief varieties of the indigenous plant grown in Guzerat are the *open* and *close-podded* cottons, the latter being generally known as Dollera cotton, and its production being

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confined to the western side of the Gulf of Cambay. The pod does not burst when ripe, like that of the other variety known as the Broach cotton, but merely opens a little at the top; and when picked, the cotton is picked, pod and all. In this state it will keep for years, a specimen having been shewn me in the pod, which had been picked sixteen years ago, and the colour of which was still good, although the strength of the staple was impaired. Dollera cotton is esteemed for its whiteness; and no doubt the preservation of its colour is much owing to its being protected by the pod from the dirt and stains to which the cotton on the other side of the gulf is exposed. The sowing season commences early in June, immediately after the first fall of rain. The land being prepared by ploughing, the seed is sown by means of a drill-plough, in parallel rows, on the average about eighteen inches apart, several rows being sown by one sweep of the machine. The seed is then covered by means of an implement, which usually follows the drill plough, consisting of a board or log of wood, extending over as many rows as the drill-plough, and covering the seed with earth as it is dragged along by a pair of bullocks. In from five to seven days the young plant appears; after which thinning and weeding are the only processes necessary before the ripening of the crop, more than one weeding being sometimes necessary. The crop matures, in some cases, about the beginning of February, and generally during the course of that month; after which the cotton is picked, and the produce transferred into the village khullee, or place of common deposit. The picking extends through the month of March, and frequently into April.

The following list of the implements used, with their prices, will shew the stock-in-trade possessed by a cotton-grower in Guzerat:

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	R.	a.	p.		£	s.	d.
Hull, or plough	2	8	0	=	0	5	0
Khurrub, or implement used for cleaning and turning up the ground before sowing it.	2	8	0	=	0	5	0
Turphein, or drill-plough . . .	1	0	0	=	0	2	0
Duntar, the weeding-machine . . .	1	0	0	=	0	2	0
Kurburree, a smaller weeding-machine .	0	8	0	=	0	1	0
Total cost . . .	7	8	0	=	0	15	0

To this must be added a pair of bullocks and a cart, both of which may be had, on an average, for 90 rupees. This gives 97½, or say 100 rupees, as the whole stock-in-trade deemed necessary for a Guzerattee farmer. Those thus provided may hold from 5 to 50 Broach beegas of land; that is to say, from 2½ to 25 acres, the Broach beega being, for all practical purposes, equal to half an acre. Where pasture-lands exist, some of the ryots are in the habit of keeping buffaloes, which are only useful to them for the milk which they yield.

Before proceeding to the consideration of another branch of the subject, I may as well here advert to the attempts which have been made to introduce into Guzerat the culture of exotic cotton. Hitherto they have not met with any very great success, although they are still prosecuted, there being now two superintendents of cotton experiments, one at Dundooka and one at Surat. It is held by many, that the rival varieties can flourish in Guzerat only under different circumstances, the American plant requiring more moisture than the indigenous to bring it to maturity. As the indigenous plant flourishes with the moisture supplied, it is maintained that the American can never be established as a rival to it in the province. This, at all events, is certain, that, after all that has been done to introduce it into Guzerat, there were last year

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but eighty-five beegas, or about forty-two acres, throughout the whole province, sown with the American variety.

But there is no reason to despond, even should the New Orleans variety not flourish in Guzerat. The indigenous plant is still left us, readily adapting itself to the soil and climate of the province. It may seem strange, yet it is true, that the English manufacturers scarcely yet know what indigenous Indian cotton really is. Let it once be supplied to them, produced and prepared for market under every advantage which can tend to its improvement in fibre, colour, and staple, and its character will soon become revolutionised both in Liverpool and Manchester.

In almost all the cotton-growing districts of Guzerat, the practice of a rotation of crops is observed, as absolutely necessary to keep the land in heart. This practice is departed from only under the stimulant of very high prices, which sometimes tempt the cultivator to replant his land with cotton for some years in succession. Cotton is not always planted alone, it being no uncommon thing to find some of the inferior grains growing along with it in the same field. Rice is sometimes sown with it, when circumstances admit of its being so. Nothing is gained by this system of double cropping, unless it be that one crop may prosper should the season prove unpropitious to the other; though at the best, instead of one good crop, the ryot gets but a partial crop of both.

Picking the cotton from the pod when ripe may be regarded as the first process in its preparation for market. Picking is a process which engages men, women, and children; and is that during which much of that dirt of various kinds gets intermixed with the cotton, which it is afterwards found so difficult to remove. This is partly owing to carelessness or to design, and also, to some extent, to circumstances which it is difficult to control. Guzerat,

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populous as its cotton districts appear to be, suffers at the commencement of the picking season from a deficiency of labour. It so happens that wheat and barjree, with some other cold-weather crops of minor importance, ripen about the same time as the cotton. The first care of the people is to secure the grain, particularly the barjree and other grains, which forms their staple food. It is not that they attach a superior money value to their grain-crops, the reverse being generally the case; but that they are anxious, whatever happens, to secure their food for the coming year, taking their chance as regards the crops, out of which they are to make good their payments to government and other burdens. Another difficulty in the way is the intervention of the Hoolee holidays, which occur in the beginning of March, and during which it is only under the pressure of severe necessity that people can be got to work. They last for several days, when labour, particularly in the towns, is generally suspended.

After the grain is reaped there is abundance of labour available for the picking of the cotton. But in the mean time almost irreparable mischief has been entailed upon the crop. Much of it has fallen from the pod, and is either lying on the ground or sticking to the dry leaves of the plant, which are carelessly picked along with it. The damage which it receives from lying on the ground is frequently irreparable; for, apart from the heavy dews with which it is nightly soaked, it is not unusual about the end of February and beginning of March for heavy showers to fall, which beat it violently to the ground, mix it with moist earth, and destroy its colour. Such is the condition in which the cotton is too frequently found when the pickers at length enter the field. The pod, too, is frequently so brittle from being over ripe, that on the cotton being picked from it, bits of it come off with the fibre, and

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are committed along with it by the picker to his bag. Under these circumstances, the state in which it reaches the general storing place may be imagined, the colour of the mass being frequently a darkish grey, from the extent to which earth, seed, leaves, and pods are mixed with it.

The first picking, when carefully made, and in good time, affords the best cotton of the season. The second crop is the most abundant; and the third is greatly inferior to the other two both in quality and quantity. The three pickings extend from about the end of February to the beginning of April, although the third sometimes runs far into the latter month.

When the cotton is picked it is removed to the village khullee, as a guard against depredation and as a security for the revenue. In the khullee the whole produce of the village is thus stored, although such a thing as a storehouse is seldom to be seen. The khullee is an open spot contiguous to the actual village, and is sometimes surrounded by a hedge, but at others utterly unprotected. Each village has its watchmen to guard the khullee by night against the depredations both of man and beast; whilst government has also its havildar, to see that its security as regards its dues is not encroached upon.

The grain, after it is threshed out by bullocks' feet, is generally piled in heaps upon the surface of the ground, each pile being covered over with the dry leaves of the jowaree. Cotton, again, is generally stored *underground*, instead of on the surface. Attached to the khullee, and forming part of it, are a number of pits, averaging about 8 feet long, 4 feet wide, and 5 feet deep, into which the seed-cotton, or kuppas, is thrown on its being brought from the field. Formerly these pits were very negligently prepared, the cotton coming in direct contact with the loose moist earth forming their sides and bottoms. More

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care is now taken, however, with their construction, and it is imperatively required that both the bottom and the sides of the pits be well cow-dunged before being used. In many instances this is most inefficiently done; and in others, where the pits are well lined, the cotton, through wilful fraud, being put into them before the cow-dung has had time to dry, gets moistened, and has its colour seriously impaired.

But supposing the pits to be well lined, the cotton is still liable to serious adulteration from being unprotected above. In many cases the pits are left open, and the cotton is exposed to the flying dust, and to intermixture with the loose earth surrounding the mouths of the pits. In other cases the earth is often systematically thrown in, as layer after layer of cotton is deposited in the pit. Where the pits are covered, they are sometimes opened at night, that the dews may fall upon them and moisten the cotton, being covered up in the daytime to prevent the increased weight thus obtained from being lost by evaporation. When the cotton is to be brought to market, it is taken out of the pit, with all its impurities, and thus conveyed in large cart-loads for sale. I have myself seen carts come with cotton to Mr. Landon's gins at Broach with at least 40 lbs. of moisture in each (each cart carrying about a bhar, or 960 lbs.), to say nothing of the various other substances which were mixed with the cotton to make up weight. Thus upwards of 4 per cent of that offered for sale consisted of not only useless, but absolutely pernicious moisture alone.

In some villages (a small number) the cotton is stored in sheds very flimsily constructed, consisting frequently of nothing but slight bamboo-stakes interwoven with palm or jowaree leaves. They are almost always uncovered, and are quite as liable to the objection regard-

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ing dew, and nearly so as regards dust, as are the open pits. They have this advantage, that when thus stored it can only be by design that earthy matter can become mixed in any quantities with the cotton.

Much controversy exists among officials and others as to the respective merits of pits and sheds; but I am inclined to concur with those who think that pits can be much improved, and rendered comparatively efficient. For this purpose they would require to be constructed with care, well cow-dunged, and carefully covered when filled; and wilful fraud in mixing any foreign matters with the cotton should be stringently dealt with. Sheds would not be more secure, and would be more costly, from the difficulty of procuring timber in a country so open as the cotton districts.

So long as the present system endures, the depreciation of the cotton, which commences in the field, will be completed in the pits. Between the two, it becomes mixed with an amount of impurity, of which, notwithstanding the cheapness of labour, it *cannot be again effectually freed in this country* (India). I admit that the gin goes a great way towards rendering it clean again; but that at a cost to which I shall have immediately to refer. But even the gin cannot restore its colour, when once that has been impaired.

The next step in bringing the cotton to market is its purchase from the ryot by the dealer. The latter is in all cases, except where European agents have been established, a native capitalist, who pays for the cotton he receives, partly when it is transferred to him, and partly by way of advances to the cultivators. He is, in fact, the far-famed *wakharia*, or money-lender of the village or district, of whose transactions with the ryots I shall have more to say by and by. Although the dealer is almost always a money-lender, all money-lenders are not dealers.

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Such as combine the two capacities are generally resident in the larger towns or centres of action of a district; whereas the mere money-lender may be found in any village, having, in many cases, his transactions limited to his own community. He is, generally speaking, a man of very small means as compared to his wealthier rival, and frequently unites with the transactions of a capitalist the business of a cultivator, or of an artisan of one of the higher castes. It is not uncommon, however, to find him living upon the proceeds of his scanty capital alone.

As soon as the cotton passes into the hands of the dealer, the connection of the ryot with it entirely ceases, and he is no longer responsible for any injury which it may sustain either through fraud or negligence.

It is usually the business of the dealer to clean the cotton, that is to say, to separate it from the seed, but not from its other impurities. These may all remain with it provided the seed is extracted, nor is he always very careful even about that. But when he is so, the only difference between the kuppas and the clean cotton is, that the seed which was in the one is absent from the other; but leaf and pod, and much even of the loose earth intermixed with it, all pass through the churka together.

In some cases the cotton is purchased whilst it is yet standing in the field, the terms on which the cultivator borrows money being that the lender shall have his cotton at a stipulated price. In that case the grower ceases to have an interest in the quality of the cotton, whilst he acts as if he had a positive interest in its adulteration, to increase its weight and quantity. Much of the filth which is intermixed with the kuppas is to be traced to this cause. In most instances, however, the cotton is purchased at the khullee. The owner, in removing it to the depôt of the wakharia, or native buyer, takes care to adulterate

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it when he can to increase its weight; and the buyer is not very particular as to quality, knowing he has his remedy in transferring it to the next hand through which it passes. Europeans, on the other hand, simply from being more particular in having cotton delivered to them equal to sample, have frequently much difficulty in procuring any supplies, even at prices slightly in advance.

The cotton-yard of the wakharia is generally a small space of ground surrounded by a high fence chiefly composed of loose matting, and surrounded sometimes on all sides within by low sheds, in which the churkas are at work. The middle space is entirely uncovered, and here the cotton is piled previously to being cleaned. It is left exposed to the night-dews; and where the dealer is industrious, it is sometimes turned over once or twice in an evening, that it may absorb as much as possible. In the morning it is gathered into heaps, and hastily passed through the churka when in its moist state.

Immediately after passing through the churka, the cotton is carried to the press, which is a very primitive-looking affair, the power being obtained from two parallel wooden screws, which are cut, not by machinery, but by hand. Most dealers possess a press. The quantity of cotton packed at a time by one of these presses is about half a candy, or 392lbs. The presses are for the most part very imperfect, leaving the bales in a state which renders them easily accessible to any future trickery which may be practised in connection with them.

The contest between the churka and the saw-gin has long been familiar to most part of cotton-growing India. The simple question between them is this: *Which can turn out the cleanest cotton in the greatest quantity at the cheapest rate, and in the state best adapted for the purposes of the manufacturer?*

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There can be no doubt but that the saw-gin has so far greatly outstripped its rival as regards the important points both of cheapness and cleanness. The state in which cotton passes through the churka is already well known to the English consumer; the cost at which it does so may not be so familiar to him. The churka takes two people to work it. Two men working day and night might clean about four maunds (of 40lbs. each) of seed cotton; that is to say, they might turn out more than a maund of clean cotton,—a maund of clean cotton being regarded as all that two men can clean by an ordinary day's work. That no impurities may be introduced into the cotton, they are paid by the weight of the seed extracted from it. The rate of payment is a rupee for from 4 to 4½ and 5 maunds of seed. Taking 4½ as the average, this will give them a rupee for two days' work, or four anas (6*d.* sterling) to each man per day. Now a rupee for 4½ maunds of seed is about equal to a rupee for 2 maunds of clean cotton; and as there are close upon 20 maunds in a candy, the cost of cleaning a candy by the churka is about ten rupees (1*l.* sterling). Let us compare this with the achievements of the gin.

The following is a copy of an account shewing what was done by it in 1842:

In 1842, 3476 lbs. $=4\frac{340}{784}$ candies, cleaned in six days with gin, driven by five pairs of bullocks.

Expenses of cleaning.

	R.	a.	p.
Wages of a woman to feed the gin for 6 days, at 2 anas per day	0	12	0
Wages of 2 boys for 6 days, at 1 ana per day	0	12	0
„ 4 labourers to carry cotton, at 2½ anas each	0	10	0
11 gunnies with lashings, at 1r. 4a. each	13	12	0
Half-seer twine	0	1	3

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	R.	a.	p.
For screwing the 11 bales, at 5 anas each	3	7	0
2 seers of oil for screws	0	2	6
Hire of 5 pair bullocks for 6 days	11	0	0
	30	8	9

or 6 rupees 14 anas (13*s.* 9*d.* sterling) per candy. To this we add rent and cost of establishment, and deduct packing charges to the amount of 17 rupees 6 anas, which will leave 4 rupees (8*s.* sterling) per candy as near the mark.

Let us now see what were the achievements of the gin in 1848. From a statement which I have before me, it would appear that the average cost of cleaning a candy of cotton at four stations in the Broach and Surat districts was 8¾ rupees, or more than double the cost of cleaning in 1842, as shewn in the foregoing account. But this experiment was made by government gins *on account of the government;* and even the natives have learnt that government experiments are sometimes more costly than useful. But it seems that in 1849 another government experiment was tried under better auspices and with more satisfactory results, the cost of ginning per candy, including all expenses, having been reduced to 3 rupees 10 anas, being an improvement on 1842. In fact, Mr. Landon, one of the most intelligent, energetic, and enterprising of all the Europeans who have been connected with these experiments, and who is now settled at Broach, engaged in the business of cotton-cleaning on his own account, says that he can clean the cotton, send it to Bombay, and pay all the expenses of his establishment, for the same amount per candy for which it can be simply cleaned by the churka. Nor is this all: he expects when his arrangements are more perfect than now, that he can convert his kuppas into cotton and land it at Bombay at from 7 to 8

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rupees per candy, or from 20 to 27 per cent under the price at which it is now simply cleaned by the churka. In the mere item of freight alone he saves at least 25 per cent from the superiority of his screws.

As to cleanness, any one who has seen the cotton cleaned by the rival processes will at once admit the superiority of the gin.

But it is not as regards *cheapness* and *cleanness* alone that the gin has so manifestly outstripped the churka. In point of *celerity* also it has decidedly the advantage. This, however, is more applicable to the steam-gin than to that driven by animal power. The average daily out-turn of each gin worked by eight men was 185lbs. of cotton, or a little more than 23lbs. to each man; but I have already shewn that two men working for a day at the churka can turn out 40lbs. of clean cotton, or 20lbs. to each. The advantages of the *hand-gin* in point of celerity are not, therefore, so very obvious. Nor even *when driven by bullocks* is the superiority of the gin in this respect very marked; for it has been shewn that the out-turn per day for each bullock, with sixty saws instead of twenty-five for each gin, was only about 60lbs. of cotton; and in this no account is made of the labour of at least two men employed at each gin. It is evident, then, that it is only when we come to compare the steam-gin with the churka that we find the former possessing a decided advantage in all the three points.

But, admitting the superiority of the steam-gin in point of cheapness, cleanness, and celerity, it is not to be overlooked that the churka has been found to do least harm to the staple of the cotton. The product of the latter is silky and glossy, with an almost uninjured fibre; that of the gin has a dull look, and feels woolly to the touch, whilst the staple has been visibly impaired. There

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is much reason to fear that the gin cannot be introduced into India without its injuring the staple of the cotton, and therefore the question remains to be answered: Can the churka be so applied as to clean the cotton as rapidly and as cheaply as the gin? The churka is at present in a rude and simple state, and a mere germ of a more perfect machine, which might have been invented by this time but for the attention which has been paid to the introduction of the gin.

The cotton being cleaned and pressed, passes into the hands of the local agent of the Bombay merchant, or is forwarded by the dealer, on his own account, to his Bombay agent (always a native) for sale. Between the dealer's premises and Bombay the cotton is exposed to further deterioration, either from accident or design. To some of the risks to which it is then liable I shall more particularly allude when I come to speak of the state of the Guzerat harbours. After the cotton is shipped, it is no unusual thing for the master and crews of the boats or pattimars in which it is conveyed to Bombay to purloin quantities of it from each bale, making up the deficiency in weight by skilfully saturating it with salt water.

But the frauds do not end here. After ingenuity has been exhausted in devising means of adulterating the interior of the bale, in its very exterior is found scope for further fraudulent devices. A striking instance of this came under my observation whilst at Tankaria. I examined a large quantity of cotton preparatory to shipment, and probed the bales with a sharp iron instrument. They were in a most wretched state. From some of them we extracted seed-cotton, leaf, large pieces of the pod, and bits of dry earth. This rubbish we judged to form from ten to fifteen per cent of the contents of each bale. The bales were tied with mud ropes, some of which I had de-

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tached. One was weighed at the Custom House, and was found to be 15¼ lbs.; but when put into the scales again, after having been beaten on the hard floor, it weighed only 4¼ lbs., shewing that it contained no less than 11 lbs. of earth. Is it any wonder that a system of frauds pursued so steadily in every stage of the progress of the cotton, from the field where it is grown to the quay whence it is shipped, should have imparted to Indian cotton a more than questionable character in the English market? The wonder is, considering all this, and the many other difficulties with which the cotton trade of India has had to contend, that it has at this day an existence.

For this disgraceful state of the Indian cotton trade a portion of the blame attaches to the Bombay merchants, and the manner in which they conduct their business. I am not about to join in any clamour against them that others may pass uncensured; but the system whereby the European merchants transact their business, through shroffs or native brokers, does not favour the improvement of the trade. The merchants leave too much power in the hands of their brokers, who unfortunately have in many instances been found to have had interests of their own to subserve not very reconcilable with those of their employers.

It would be both loathsome and tedious to recount the multiform aspects which the frauds perpetrated have been made to assume; all of them, of course, being turned to the advantage of the go-between.

Such being the evil, whence is to come the cure? Some rely much on the exercise of a superior degree of vigilance on the part of the merchants; and others, again, are disposed to lay much stress upon the establishment of European agents and capitalists in the cotton-growing districts. That much good would be effected by the gradual supersession by Europeans of the native dealers, who play

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so early and so conspicuous a part in the frauds which are perpetrated, can scarcely be doubted. They would introduce with them European notions and principles of business, and infuse new life and activity into an industry which is now very languishing. So desirable indeed does this arrangement appear to be, that many call upon government to spare no effort on its part which might lead to their establishment. To this there are objections which are either overlooked or too easily made light of. Government may open up the country, and bring the coast and the interior into easy communication, thus affording a field for European enterprise and capital; but if private enterprise is to succeed, it must rely entirely upon its own energies, and not on any extraneous help it may receive from government.

In other instances the government has permitted its superintendents of cotton experiments to act as private agents for the purchase of cotton for certain firms in Bombay. The impolicy of such a step is obvious on many grounds. These superintendents are paid fixed salaries by government, but receive a commission on the purchases they make for their principals in Bombay; need it surprise any one, therefore, to find men under these circumstances neglecting the duties for which they are regularly paid fixed sums, and devoting their chief attention to that branch of their business which may be to them the source of an indefinite income! For nearly sixty years past the public have heard of experiments, and have waited all that time for definite results; but in most cases none have been produced. If these experiments are to be brought to a termination, it will be necessary to pay well those who are appointed to conduct them, so that no excuse need exist for their dividing their attention between them and other objects.

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I am persuaded that the introduction of European capital and enterprise is essential to the thorough regeneration of the Indian cotton trade; but that cannot be accomplished without the aid of government, for by it alone can the country be opened up, and its means of communication put on something like a civilised footing. Such would be a legitimate exercise of the functions of government; for the facilities which it would thereby afford to the naturalisation of European capital would be of catholic application, facilities alike to the native and to the European. Let government do this, and it will entitle itself, with justice, to that credit already claimed for it by many of its friends.

I am quite aware of the difficulties, in addition to the physical obstacles to be encountered, with which the European in the interior has to contend; but were the country opened up to enable Europeans to find a field for the investment of their capital and enterprise, most of these difficulties would readily be overcome; under such circumstances new life would be infused into the cotton trade, and the frauds which have hitherto disgraced and retarded it would rapidly disappear.

But the panacea here indicated is not to be administered in a day. The country has been permitted to fall so far back in every thing pertaining to material improvement, that it will be by no sudden effort of contrition that government can make up its long and shameful leeway. The *much* which has to be done must, even under the most favourable circumstances, be of but slow accomplishment; and, in the meantime, government has other duties to perform with a view to the immediate improvement of the cotton trade. Roused at length by the demands made upon it on all hands for action, and quickened by a tardy consciousness of the disrepute into which the chief feature

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in the export trade of the presidency was universally falling, the Bombay Government recently adopted an enactment with very stringent provisions, with a view to put a stop to fraud. The chief provision of the act was the confiscation in Bombay of the adulterated article, in whose hands soever it might be found. The act was sent to the supreme government at Calcutta for confirmation, and the answer returned was a demand for further information, which in India is viewed pretty much in the same light as the reference of a bill to a select committee is in England.* On the whole, it would not be a matter of very great regret were the act to remain for ever in Calcutta. The adulterated cotton is to be seized in Bombay in the hands of the actual holder. The seizure would generally take place at the screws, and in nine cases out of ten the holders of the cotton would be innocent parties. But it may be said that they would not be remediless, inasmuch as they could fall back upon those from whom they received the cotton, and so on, until at length the actually guilty parties were overtaken and punished. But this, to say the least of it, is a clumsy and circuitous mode of getting at the guilty parties, and reminds one of the practice of the pedagogue who was in the habit of flogging his whole class that he might reach the unknown culprit. The penalty is in the first place made to fall upon innocent parties; for the far greater part of the adulteration takes place in the earlier stages of the preparation of the cotton for market, and before it leaves the up-country presses. It may sometimes happen that the guilty party is never reached; for suppose each previous party to the transaction should refuse to re-imburse any advances which may have been made upon the confiscated article, the only

* This was in February last; but since writing the above, I perceive that the act has been read a first time in Council at Calcutta.

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remedy would be a suit at law, and it might thus be, through a chain of protracted and expensive litigation, that the guilty would be at length overtaken. It is obvious that, if frauds are to be effectually checked, the punishment must be awarded when and where the mischief is done, viz. at the up-country screws.

The native dealers clean and press the cotton, and therefore need never be imposed upon with bad or mixed lots; whereas subsequent parties may be imposed upon notwithstanding great care and vigilance. Should the loss, therefore, fall ultimately on the dealers, without their having any remedy beyond, they would be entitled to no sympathy; for the adulterated article, which they have not adulterated themselves, they must have knowingly received in that condition from the ryots.

The plan which seems to be most in favour is the appointment of a number of inspectors throughout the cotton districts, whose duty it would be to inspect the cotton at the presses, and to stamp every bale in such a way, that it could be easily traced to the dealer who sent it into market. To this plan, which, if properly carried out, could not fail of being efficacious, no valid objection has been offered; and yet, although it has been long advocated by many influential members of the mercantile community, and even by its representative, the Bombay chamber of commerce, no effectual step has as yet been taken to carry it into effect. At some of the ports of Guzerat there are native inspectors, who are, in the first place, stationed at the wrong points to act with effect, and who are, in the next, utterly inefficient in other respects. Much as one might desire to see the natives extensively employed in stations of trust and responsibility, I must confess that my belief is, that, to be effectual, the inspection must, at first at least, be entrusted to Europeans, or to natives playing subordinate parts under a comprehensive

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and efficient European control. To entrust the matter entirely to natives, as has been done in some instances, is to ensure failure. In the first place, many of them do not know what good cotton is; or if they do, considering the cotton which they sometimes permit to pass, the inference must be still more unfavourable to them. They are amenable to temptations and influences from which the European would be exempt. In many cases they live with, and are the near neighbours of, those on whose property they are called upon to decide; and it is not likely that, in that case, if they can possibly avoid it, they will go the length of confiscation. I have seen cotton passed, both at Randeer and Tankaria Bunder, which proved the inspector to be blind, weak, or corrupt.* To simplify the matter, the presses might be licensed, and an inspector appointed to each place where cotton was cleaned and pressed. The bales, as they were passed, should be distinctively marked with the place where they were pressed, and with consecutive numbers, from one upwards. In this way, should a faulty bale reach the market, it could be at once traced to its source. Notwithstanding all the cry that has been raised for years against the frauds which have been practised, nothing of this kind has as yet been done to discover guilty parties, with the single exception of bales from Baroda, which have this year been marked by the collector of Broach, that they might be distinguished from Broach cotton, for which they were largely passed off.

Whether this plan be adopted or not, it is evident that

* In one case, a native officer, exercising both magisterial and revenue functions, whose duty it was to have seen that the inspection was not a sham, was present, and saw the adulterated article. He has since had the impertinence to procure a letter to be written to me, requesting me to certify to the revenue commissioner that the cotton in question *was not adulterated;* in other words, to append my signature to a direct lie. This may serve to shew how strict must be the look-out kept upon them, should they be entrusted with subordinate positions as inspectors.

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something must be done, more comprehensive and efficient than has hitherto been attempted, to put a stop to a system of fraud, which has long ago outgrown all private means of repression, and which can only be effectually checked by a firm and judicious interference on the part of government.

I need offer no apology for dealing thus early, and at such length, with this branch of the subject; for whatever else may be done to put the cotton trade of India upon the footing which it should occupy, little effectual will be done, until it is rescued from that wholesale system of fraud, which has long exercised so pernicious an influence over it.

I cannot leave this part of my subject without alluding to the energetic exertions made by Mr. Davies, whilst collector of Broach, for the suppression of frauds. The extent to which those exertions were rewarded with success, is shewn by the fact, that never, in the history of the cotton trade, were the receipts from Guzerat, but particularly from the Broach side of the gulf, so uniformly good as during the past year. On his translation to Surat, of which he is now collector, the chamber of commerce of Bombay thought that a fitting opportunity had offered for testifying to Mr. Davies its sense of the value of his exertions. It therefore addressed a letter to government expressive of this feeling, and requested that a copy of it should be transmitted to him. The government replied to the effect, that it was not its practice to comply with such requests, but that, in this instance, it would depart from its usual rule, and transmit a copy, which was accordingly done. The letter must have been gratifying to Mr. Davies, in view both of the source whence it emanated, and the channel through which it was conveyed.

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CHAPTER II.

TENURES IN GUZERAT—IMPORTANCE OF THIS SUBJECT TO THE NATIVE CULTIVATOR—DIVISION OF THE TERRITORY INTO GOVERNMENT AND ALIENATED LANDS—VILLAGE SYSTEM—RELATION OF THE CULTIVATOR TO THE SOIL.

I NOW come to the consideration of a subject of the highest importance in connection with the general question of the state of agricultural industry in Guzerat, viz. the *tenure of land.* It would be altogether beside my purpose to trace the subject to its remote sources either under Hindoo or Mahometan law. My object shall be to describe existing tenures just as I found them, and to convey a general and distinct impression of the whole subject, instead of entering into an elaborate exposition of its different parts.

Into whatever branches the question of the cotton trade of India may divide itself, they are all subsidiary to the grand consideration of the *condition and prospects* of the *cultivator.* You may effectually suppress frauds, permanently reduce freights, largely improve the means of internal communication, and effect many other desirable objects of collateral import to the trade; yet if you leave the cultivator crushed, dispirited, and hopeless, from exactions which are over-burdensome, made in respect of lands held by tenures which are doubtful, you work no radical cure; you merely trim the branches of a tree, the trunk and roots of which are unsound. The whole question begins and ends with the condition of the ryot, and what that is may, to a great extent, be inferred from a

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brief consideration of the *burdens which he bears; and the tenures by which he holds.*

A general glance at the province suffices to shew that the village system is the grand foundation upon which its tenures rest, no matter in what variety or in what combination of forms they may otherwise present themselves. Guzerat is but an aggregate of villages of different sizes and shapes, there being not an inch of land throughout its length and breadth, except perhaps river islands and recent deposits of the sea, which is not comprehended within the limits of some village or other. In the well-wooded parts of the country, trees and hedges may designate their boundaries; but in the open districts, where the black soil abounds, and cotton is most raised, the dividing line always consists of a strip of uncultivated land, varying in width from 5 to 150 feet. The actual village in which the occupiers of the land live is generally situated about the centre of its little territory; its site being invariably indicated in the open country by a solitary clump of trees, and in the wooded districts by a greater density of foliage than that which shades and ornaments the fields around.

After this territorial division, the next which forces itself upon the observation is the proprietary one, the whole surface of Guzerat being divided into *government* and *alienated* lands. The government lands, or, as they are sometimes called, "tulput," and in Kaira and Ahmedabad, "kholsa," are such as pay the full government assessment. The alienated lands are usually designated indiscriminately *rent-free lands,* although *a portion* of them *only* is entirely exempted from assessment, the rest being subject to the payment of a *quit rent,* generally small, but in some instances amounting to nearly the full rent of the government lands. The proprietary rights of the government are not therefore limited to the government

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lands strictly so called, being asserted over such of the alienated lands as pay a rent, however small; inasmuch as, equally with the government lands, they are liable to attachment and sale if that rent be unpaid. Some of the alienated lands are held upon service-tenures, and are liable to forfeiture on non-performance of service. But in most of these cases the demand of service has been long discontinued, so that lands so held may now be classed amongst those *entirely free*. What is here said of the proprietary, as well as of the territorial or municipal division of the land, is as applicable to *native* as to *British* Guzerat; the native and British governments being, within their respective territories, in corresponding positions as regards the ownership of the soil.

In addition to the difference between them on the score of rent, the alienated lands differ from each other in respect of their territorial distribution. In some instances they consist of *whole villages* alienated; but with this exception, they are not detached in the lump from the government lands, the bulk of them being scattered about, in greater or less portions, throughout the government villages. What has been said as regards the payment of rent is applicable to those lands in either situation, some of the entirely alienated villages paying a quit rent, and some of the alienated lands scattered throughout the government villages being wholly exempt from taxation.

There are many different kinds of alienated lands, to enumerate which would be but to present an array of hard names, many of which are not of sufficient importance in the landed system of the province to compensate for the trouble of overcoming them. In Kaira and Ahmedabad, for instance, there are no less than thirteen different varieties. The most important are the four fol-

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lowing: *Waunta, Wuzeefa,* and *Passaeeta* lands, and such *Enam* villages as are *entirely alienated,* the word *enam* being often applied indiscriminately to *all* alienated lands. The entirely alienated villages are generally of the kind first named, viz. *waunta;* being either still in the possession of the descendants of the original owners, or given over to the enamdars of more recent creation, to hold by a tenure similar to that of the grassias or original proprietors. These enamdars and grassias are the only parties in all Guzerat who approximate to the position of a *landlord* in the European sense of the term. Akin to the enam villages common to Guzerat are the *jagheer* villages to be found in Surat, which were originally given away on condition of personal service; and in some instances, as was likewise the case with regard to ordinary enam villages, for services already performed. But the right of government to them, when the transfer was for future services, has abated through long discontinuance in exacting them; and the lands may now, like other property purely private, be absolutely transferred by sale or otherwise. The lands now chiefly known as waunta are the remains of the estates of the original proprietors, after successive invasions of their rights by different native governments. A fourth part of the village, which at first, in many instances, wholly belonged to him, was latterly left to the grassia, and conditions imposed even on his retention of that, such as that he should keep the peace, and aid the government in realising its revenue. But it has since been greatly reduced by sale, mortgage, alienation, and encroachment, until, from being a fourth, it now only amounts, on the average, to about a tenth, even in Broach, where the alienated lands bear so large a proportion to the whole area. The *wuzeefa* lands are such as were set apart during the Mogul ascendancy for the use of

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Mahometan shrines; but under the term a good deal of rent-free land is also included, which has been reserved for the maintenance of Hindoo temples, and other religious and charitable establishments. The *passaeeta* lands are such as are set apart for the support of district and village officers, comprising a pretty large section of each village. They are known as *official rent-free* lands, and in Broach amount to about one-fifteenth of the whole cultivated area of the collectorate. The others are of minor importance, inasmuch as they are comparatively limited in amount, and, in some instances, only known in particular districts. The chief of them are such lands as have been sold or mortgaged by the patels of villages, either to enable them to meet exorbitant revenue demands, or for their own private purposes. The former are known as *Vauchan*, and the latter as *Gerauneea.*

The proportion borne by the alienated to the government lands is by no means insignificant. In Broach it is no less than *forty per cent* of the whole cultivated area of the collectorate; and to the north of the Mhye the proportion is still greater, large encroachments having been made upon the government land during the latter days of the Mahratta empire. The alienated lands of Kaira amount to nearly fifty per cent of the whole cultivated surface. In Ahmedabad the proportion is also very large, as is indicated by the difference between the gross and the realisable land revenue. In Surat they are twenty-five per cent. In Baroda the proportion of alienated lands is large, but not easily ascertainable.

Every village not entirely alienated is a government village. The number of villages entirely alienated is comparatively very small. The government villages are, as to their organisation and forms of management, differently distributed throughout the different collectorates. The

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form of village constitution which first attracts attention is the *bhagwarree* or *share* village, or, as it is called north of the Myhe, *nirwa* or *divided*, a name by which it is also generally distinguished in Baroda. This class of villages is more numerous perhaps in Broach and Baroda than in other parts of the province; the *nirwa* villages of Kaira and Ahmedabad particularly bearing but a small proportion to those differently constituted and managed. In Broach, on the other hand, they are the most prevalent. The other great class of villages is the *undivided*, so called in contradistinction to the *bhagwarree* class, each of which latter class is partitioned amongst the different shareholders bound together in a species of copartnery. Under the head of undivided villages thus understood may be classed the *beegotee* villages in Broach and elsewhere, as indeed may be *all villages*, whatever may be the peculiarity of their constitution, which do not appertain to the *bhagwarree* or *nirwa* class.

The *bhagwarree* villages speedily developed themselves into a form differing essentially from their original constitution. The *bhagdar*, or head of the village, had originally a species of sole proprietary right, subordinate to the rights of the government, to which he, and he alone, was responsible for the rent. He was, in fact, a little *zemindar*, placed between the government and the cultivators, paying to the former a stipulated tribute, and exacting from the latter whatever in excess of this tribute he could get. But as the *bhagdar* family became numerous, it became necessary either to divide the village amongst them into independent properties, or to constitute each fractional part into a share of a common stock, and to resolve the aggregate proprietary into a copartnery. Such has been the course followed, almost without exception, throughout the whole province; a village in the

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hands of a single bhagdar being now scarcely found to exist. To avoid the evils of too minute a division, not so much of the land as of the authority and management of the village, a primary division was made of it into as many shares as the common ancestor of the family had sons; these shares being then subdivided amongst the descendants of the different sons. In each case one of these descendants either was appointed or assumed to manage the concerns of the common share, becoming responsible to government for the revenue accruing from that share, and collecting the same from the different cultivators of the share, who became in a measure his tenants. If any cultivator makes default in paying his rent, his fellow-cultivators have to make good the deficit; but whether they do so or not, the bhagdar is responsible for the whole rent of the share. As a set-off to this, if he realises *more* than the government rent from the cultivators of his share, he is entitled to retain the surplus. Such are the position, powers, and responsibilities of the heads of the different shares into which the villages have been divided. As each *bhag* or share has to make good its own revenue if it can, by making all the cultivators of the bhag answerable for the default of any of them, so the *whole village* is responsible for the *whole revenue*, the other bhags or shares being liable to make good the default of any one or more of them which they cannot make good for themselves. One of the bhagdars is chief patel of the village, an office hereditary in his family; but it is usual to apply the word *patel* to each of the bhagdars. Thus a village will be found to have as many patels as it has holders of primary shares. The application of the term is carried even further than this, for it is not uncommon to call such of the ordinary cultivators *patels* as belong to the patel family.

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It happens in some cases, though very rarely, that all the cultivators of a village holding their respective fractions of the different shares belong to the patel family. In the great majority of the villages only a portion of them do so, the remainder being strangers or cultivators holding of the bhagdars, but having no connexion with the family. The proportion between these two classes of cultivators varies very much; the "patteedars," or those belonging to the patel family, sometimes forming seven-eighths of the whole number, and at others not more than one-third or one-fourth. The rights of the patteedars are, generally speaking, similar to those of the bhagdars; that is to say, each cultivator of the patteedar or patel class has as much right to his fractional part of the share under which he holds, as the bhagdar has to the bhag, or to the portion of it which he reserves to be cultivated by himself. It is different, however, with the other class of cultivators, who have no such rights, but generally hold their lands on such terms and at such rates as the *bhagdars choose to impose.* The one class has prescriptive rights which cannot be disturbed, except on failure to pay rent; the other usually consists of mere *tenants at will,* whom the bhagdars may oust at their pleasure. The "stranger cultivators" are frequently found cultivating the private lands of the bhagdars, when the latter reserve to themselves larger portions of their shares than they themselves can or will cultivate; but for the most part they are found in the occupation of such portions of the different shares as the patteedars do not or cannot cultivate, the greater part of their holdings having been originally waste, and reclaimed through their instrumentality.

The bhagwarree system by no means now flourishes in the vigour which formerly characterised it. In some cases it has tended towards dissolution, from its own in-

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herent defects; and in others it has been impaired by the violation of its integrity on the part of government.

Such is the form of village constitution which we are told prevailed from the earliest ages throughout India, outliving, until recently, all the changes of fortune to which this singular country has been subjected. However attractive it may at one time have been, certain it is that, in Guzerat, it has but little to recommend it *now;* for it seems to exist only to perpetuate the evils which always flourished under it. A check is now put upon the transactions of the patel with the ryots by the presence in each village of a stipendiary government, *tullatee,* or village accountant, instead of the hereditary officer who preceded him, and who, in the course of time, became the mere creature of the patel. There were not a few who severely animadverted upon this substitution of a stipendiary and independent officer for the dependent hereditary functionary of former times; but such an arrangement was indispensable for the protection of the ryots, and now the patels are the only parties who cherish any jealousy against these officers.

Whatever may be the varieties in their forms of management, the whole of the villages which do not fall within the category just described may be gathered into one great class, under the term *undivided,* that is to say, undivided on the copartnery principle. In these villages there exists a variety of tenures, some of which, particularly in those cases in which the distinction consists in the *mode of payment,* extend also to the share villages. They are, indeed, divided into seven classes, distinguished by the tenures most prevalent in them. The first consists of the *begotee* villages, in which each ryot holds independently of his neighbours, and pays so much per beega upon his land, according to its quality. He is the imme-

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diate tenant of government, there being, generally speaking, no party interposed between him and the collector in the capacity of landlord, middleman, or otherwise. The second class consists of villages in which the *khatabundy* tenure prevails. By some this is regarded as a perpetual lease, and it would appear to imply a leasehold; but it is denied by others to be of this nature. Under it, the *khatadar*, or holder of lands in khatabundy, has lands assigned him of different qualities, the rent being chiefly, if not wholly, laid upon the best lands of the *khata*, which he holds on the express condition that he will cultivate the inferior lands; at all events, whether he cultivates them or not, he is liable for the rent of the entire holding. There is then the class known as the *veta* villages, in which the holder of *rent-free lands*, which pay but a small *salamee* or quit-rent to government, are saddled with a small portion of government land at an exorbitant rate of assessment; this being, in fact, a mode of indirectly deriving a revenue from the alienated lands, the excess paid upon the government lands being set off against the light quit-rent paid by the alienated lands. This system abounds more in Kaira and Ahmedabad, where alienated lands, without authentic titles, are supposed so greatly to prevail, as it is also in the native state of Baroda. The khatabundy system is more universal, prevailing throughout the collectorates just named, and throughout Surat and the southern pergunnas of Broach; the khatabundy tenants both in Surat and Broach generally holding by lease for seven years. The mode of making the lease is simple, the tenant merely signing his name or mark in the proper book, wherein it is stated that he takes the land for seven years, agreeing to pay during that time the established assessment upon it. The advantage which the khatabundy tenant has is, that, should

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he reclaim any waste or grass land in his holding, he keeps it for his term at the rate of waste or grass land, which is not the case with a begotee tenant. In some villages the *hullvers'* system is very prevalent, which is a tax upon the plough and bullocks in a man's possession, equal to the full rent upon *as much land* as he is supposed to be able to cultivate with them. In other cases, a personal tax, called *asamee*, is laid upon the holder of rent-free lands. Other villages are known as bhagbataee villages; but the term 'bhagbataee' has reference more to the *mode of payment*, which is *in kind*, than to the amount of the tax or the nature of the holding. Thus in every village, either of the bhagwaree or undivided class, the bhagbataee mode of payment may obtain. The last kind is "*tateechas*," which is when lands on the confines of a village are cultivated by poor people, a uniform tax being laid upon the lands, without reference to their quality or condition. With the exception of the beegotee and khatabundy tenures, the other varieties are seldom met with in British Guzerat south of the Mhye. They go by different names in the different districts in which they are met with. In Kattiawar a different system, the *gamutee*, is prevalent, which implies a lease of the lands for seven years. This tenure was formerly almost universal throughout the pergunnas of Dundooka and Gogo (in the collectorate of Ahmedabad), which lie on the Kattiawar side of the Gulf of Cambay. It generally obtains in what are known as the *talookdaree* villages, which are leased to the talookdars, or grassias, who, out of the whole revenue derived from their villages, pay seventy per cent to government, reserving thirty to themselves. The only proprietary right recognised in the talookdars is their right to a share of the revenues of the villages. Their leases are regarded as renewable in perpetuity, although the terms of renewal

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are not unalterable. In Surat, a species of tenure very common is the *hoonda*, which is land held of government at a fixed sum for the lump or quantity, without reference to the number of beegas or the value of each beega. There is also in the same collectorate the *Ooperwaree* tenure, which is land cultivated by parties not belonging to the village in which it is situated, and who obtain it on comparatively easy terms, in consideration of the disadvantages under which they thus labour. Several of the different kinds of tenures here considered as characterising the undivided class of villages, embrace the alienated as well as the government lands. The only difference is, that in the one case the tenant holds of government, and in the other of a private proprietor.

Such being the surface aspect of the landed system of Guzerat, let us look a little deeper, and inquire more minutely into the relations borne by the *actual cultivators* to the soil. If the connexion of the ryot with the soil be of a nature to depress instead of stimulating his industry, and to retard instead of promoting the development of agriculture, the system is at once condemned, and calls for immediate modification. *What relation, then, does the cultivator really bear to the soil in Guzerat?*

Much able controversy has been expended upon the question of the right of the ryot to the soil. Whilst some have contended for his *absolute ownership* of the land, others have limited his right to the *permanent usufruct* of it, subject to certain conditions. But whatever may have been his original rights, the question of greatest interest now is, What position does the policy of the government assign him at the present day?

In the report of the proceedings before the parliamentary committee of 1848, on the subject of the growth of cotton in India, I find the following questions and

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answers, as part of the evidence furnished by Mr. Prideaux, who had been then for eighteen years assistant to the examiner of India correspondence, and in charge of the revenue department of that correspondence.

105. *Chairman.* Can you tell the committee whether any cultivator in India,—I speak particularly of those parts where a settlement has not been made in perpetuity,—has any right to the soil, which is not dependent upon the company? *Undoubtedly they have.*

106. In Bombay, for instance? Yes, an *indefeasible right.*

107. What kind of right is it,—how is it exercised? For example, can any man sell his plot of land? Certainly.

108. He can sell it to a neighbour? Yes: the right to landed property in India is, generally speaking, just as perfect as it is here; the right to hold property subject to the payment of the revenue.

Now the answer to question 105 is to the effect that the ryots share rights which are *not dependent* upon the company; whereas that to question 108 informs us that their rights are *dependent* upon conditions, which, being imposed upon them by the company, bring them into direct dependence upon it. But, without dwelling upon this inconsistency, let us observe the general drift of the section just quoted. "The ryots," Mr. Prideaux says, "have an indefeasible right, a right not dependent upon the company;" and a right, therefore, independent of every body, for there are as yet no *zemindars* in Western India, to which place the evidence chiefly refers. This would seem to constitute them *absolute owners* of the land, which many contend that they rightfully are,—owners having a complete power over it, the power to *retain* as well as to *dispose of it,* for the right to landed property in India is, generally speaking, as perfect "as it is here" (in England); the ryot in India, who has the complete power

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to retain, having also the power to "sell his plot of land." Now, if this is not a *fee simple*, it is the nearest approximation to it that can be made without merging entirely into it. And was it not Mr Prideaux's intention to convey to the committee that, if the ryot had not an absolute fee simple, he had the very next thing to it? Whatever may have been his intention, there can be little doubt but that such was the impression produced by the evidence both upon the committee and the public at large. How far that impression was a correct one, a further examination into the question will shew.

In his minute of 1821, written after his tour through Guzerat, Governor Elphinstone thus describes the tenure prevalent in the province:

"The commonest tenure here is that which is also commonest throughout India. *The ryot holds his land on a general understanding that he is not to be dispossessed so long as he pays his rent, which, although not fixed, is regulated by the custom of the village.*" He is here speaking more particularly of the collectorates of Ahmedabad and Kaira; but it is obvious that his remarks are applicable to the whole province. The gulf which separates a tenure like this from a fee simple, or any thing wholly or nearly tantamount to it, is visible at a glance. It is a mere holding *subject to the payment of rent;* and the only thing which imparts to it any thing like a permanency is a *general understanding* that it will not be disturbed so long as the rent is paid. Thus, instead of being a *fee simple*, or *as good* as a *fee simple*, it is a tenure inferior even to a *leasehold for years*, which is always held on a *fixed* rent; the rent, as Governor Elphinstone remarks, *not being*, in the case of the ryots holding, a *fixed* one.

Again, in the able statistical report presented by Mr. Davies, in 1849, respecting Broach, I find the following

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statement respecting the tenures of that collectorate. After shewing that the government land is divided into two classes, the first being that in respect of which no supervenient rights of occupancy interfere to prevent the immediate disposal of the land, as the agents of government may see fit, the report speaks of the other class as that class of lands of which "*prescriptive occupancy* guarantees the possession and usufruct, *so long as the dues of the state are met.* The latter is by far the most general, comprising most of the land in established villages. But *no fee simple or absolute possession*, with *absolute power* of *disposal* over the land, can be obtained, without the direct sanction of the state." In other words, such possession, with such powers of disposal, *constitutes no feature* in the landed system of the collectorate. Into the precise value of this *prescriptive occupancy* I proceed to inquire.

It is compared by many to a fee simple, which is an indefeasible title. To such a title a power of *retention* is necessary, the very meaning of the term being, that the title is one which cannot be *cut off* or *vacated* without the owner's consent. In some cases there are indefeasible titles which cannot be cut off even with the owner's sole consent. But a fee simple, the highest of all titles, gives a man the absolute disposal over the land, in the exercise of which absolute power he can either *retain* it in his own hands or *transfer* it to another. In what sense can the *prescriptive occupancy* in question be regarded as tantamount to a title like this? Stress is laid upon the fact that, so long as the rent is paid, the occupant *cannot be ejected.* Nay more, it has been judicially decided that, whatever may be the conflicting pretensions of the government and the ryots, there is *no process of court* by which an occupier can be ejected from his lands *so long as he pays the rent.* Whilst, therefore, he is both able and willing

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to do this, he is not only secure in his own possession, but can transmit the land to his children as an inheritance. It is this latter incident alone that gives to the tenure of the ryot the slightest semblance to a fee simple. But this incident, like every other connected with it, is *contingent upon a condition*, which, if unfulfilled, no matter from what cause, *defeats* the *title*.

There are others who, wanting in the boldness necessary to liken the holding of the ryot to a fee simple, contend that it is tantamount to the nearest approximation to a fee simple, viz. a *lease for years*, *renewable for ever*. Between this tenure and the ryot's *prescriptive occupancy* there are several important points of difference. In the first place, the rent which the ryot pays is *not nominal*, but is alleged by many to absorb, in numerous instances, considerably more than any landlord could claim as his fair share of the produce of the soil. In the next place, the rent is *not fixed*, as in the case supposed, at a mere nominal rent, but *variable*, and may be *lowered* or *raised* at the will of the one party, viz. the government, without the slightest concert with the other, and at any time, without warning and without cause assigned. True, the individual ryot is protected to some extent from particular oppression in this respect by the usages and customs of the village; but sometimes these usages and customs are invaded after a *wholesale fashion*, when no particular injury is inflicted upon any one ryot, but a common injury is done to all. Such invasions of the usages and customs, not only of whole villages, but also of whole collectorates, are not matters of mere possibility, but of historic certainty; the rents of whole districts having, on some occasions, been egregiously enhanced, as it were, in a single night.

But it is not simply by the indirect mode of raising the rent that government can of its own accord affect the tenure of the ryot—this it already possesses—but it claims the

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power of altering the tenure at will. In the pergunna of Dundooka in the collectorate of Ahmedabad, leases have been granted to ryots of pieces of land between Dhollera and the sea, which contain a clause reserving to the government the power of annulling the lease at pleasure, with a view to the introduction of any revision of the assessment which it may contemplate. Such a revision, when it takes place, may, and almost to a certainty will, introduce very material alterations in the landed system of the collectorate. These alterations *may* be beneficial to the ryot; but, on the other hand, they *may not*. But whether they be advantageous or not, he dreads the unlimited power of alteration both claimed and exercised by the government.

It is quite clear, that to give any real security to this holding by prescriptive occupancy, the rent must either be *permanently fixed*, or be made subject to change only with the *consent of the tenant*. All that can be said of his present holding at any time is, that it is secure so long as he pays the *existing* rent. He pays it, because by struggling he is able to pay it; but a rent may be demanded of him which he may not be able to pay. Impossible rents have been demanded before now from whole districts of country; rents which desolated some districts, and would have ruined others but for their timely relinquishment. Had the increase made to the assessment in Broach, about sixteen years ago, not been speedily abandoned, the collectorate would ere this have been a waste.

If this be so, let us hear no more of *indefeasible titles*, in Guzerat at least. The tenure of the ryot is neither a fee simple, nor is it tantamount to one, nor is it equivalent to tenures which, in characters and incidents, resemble a fee simple, whilst it is liable at any time to be defeated, by disturbing, without the consent of the owner, the conditions on which it is held; disturbing them to such an extent, as to leave him only the alternative of a voluntary

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relinquishment of his lands, or his forcible ejection from them. A title, with such incidents, is far removed from an *indefeasible* one, of which an absolute power of retention in the owner's hands is an indispensable feature.

Let it not be supposed that in speaking of impossible rents—impossible as regards the ryots' means of paying them—I speak of that which is impossible to occur; for what are high assessments, with constant remissions, but rents impossible to be realised?

By no form of village organisation or management is the Guzerat ryot permanently secured in the possession of his land. Neither the bhagwaree nor the begotee system of itself gives any fixity to the conditions on which he holds it. They cannot render him perfectly secure against a general rise in the assessment, which he may find himself unable to bear. They did not secure Broach against such a calamity in 1835-6. In a memorandum furnished to me by the collector of Kaira, in answer to queries submitted to him respecting the collectorate, the following passage occurs, in illustration of the position of the patteedar tenants under the bhagwaree system.

"*Relative rights of nirwadars (bhagdars) and their sub-sharers.*—Suppose a village is held in shares of four rupees by four nirwadars or shareholders each of a rupee share, and each having under him sixteen ana sharers. In the event of the inability of one of these ana sharers to make up the yearly amount of revenue fixed on the ana share, the right of the superior shareholder of one rupee to take the said ana share either into his own immediate management, or to transfer it to any of the more wealthy sub-sharers (by an application to, and with the sanction of the collector), is generally acknowledged; and such instances (transfers ?) will on inquiry appear to have taken place."

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I know not whether this is an original statement, on the part of the collector, or an extract made by him from a revenue report, but, whichever it be, it shows the true position of the *most favoured* class of tenants in the bhagwaree villages. If the tenant holds the land on condition of paying rent, he forfeits it by non-payment; and the power of resumption given to the bhagdar is necessarily incident to his position and responsibilities. But he may be called upon to exercise this power at any moment by the demand, on the part of government, of a higher rent, which, although it might not disturb the wealthier of the shareholders, might lead to the ejection of the poorer class, so precarious is the position even of the patteedar tenants. That of the stranger cultivators is of course much more so, for, in addition to their liability to all the contingencies which beset the patteedar tenants, they are liable to disturbance and dispossession at the mere will of the bhagdars. In addition to their obligations in respect of their lands to government, they hold them on the condition of paying such extra rent or fulfilling such other terms as the bhagdars choose to impose upon them. The bhagdars themselves are, in a manner, as insecure as the ryots, for their responsibilities may any day be increased; and it is because they have occasionally been made too onerous, that so many bhagwaree villages have recently been dissolved; the bhagdars preferring to forego both their position and caste, so dear to the Hindoo, and to descend to the grade of beegotee ryots, to continuing invested with responsibilities which they could not meet. Nothing short of fixity of tenure, either temporary or permanent, will give security to the one or the other.

Hitherto I have treated of the ryots' tenure chiefly as regards the power of *retaining* it; and I have now a little to say in reference to the power of *disposal.* It is generally

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understood that, in this respect, the ryots' power is *unrestricted*, from which it is at once inferred that his dominion over the soil is *complete*. Mr. Prideaux illustrates the indefeasible title which he assigns to the ryot by saying that he can "sell his plot of land." But the verbiage is rather loose here. It is not the *land* which he sells, for he cannot sell that which is *not his*, but his *interest in the land;* and to say that he has an indefeasible title because he can sell *an interest in the land* is not a logical sequitur. The ryot having, as already seen, but a limited interest and a precarious title, can only convey a precarious title and a limited interest, when he transfers his land to another. Nor is he perfectly free to do even this. In the case of a bhagwaree village, he cannot introduce a stranger into the copartnery without the consent of the community, which is seldom given to such a proposal; so that his market is limited to his fellow-villagers, and generally to a part only even of them, sometimes to about one-fourth of the community, when the remainder happens to consist of stranger cultivators. These latter, who form a considerable proportion of almost every village, and the bulk of some, have, from their position as mere tenants-at-will of the bhagdars, of course no power of transfer. Nor is the beegotee tenant free to convey his land away to whomsoever he pleases; for the collector or his assistants are empowered to take exception to the transferee, and will do so if they happen to consider him unfit to be a tenant.

It appears that, generally speaking, lands held by khatabundy tenure may be transferred; but here also the transferee, ere he can take possession, must receive the sanction of the government authorities. If the party proposed be objected to, another may not be found, at the same time that it may be the wish of the existing tenant to leave. This he may do by simply *resigning his land into*

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the hands of the authorities, from whom he receives nothing for it; whereas, in passing it to another, it might have had some small saleable value to him. He must be careful, too, not to let the negotiation for transfer carry him over the 6th of June, else he becomes responsible for another year's rent, whether he stays or goes away. How far these, or other lands in the ryot's possession, have a saleable value, will be more appropriately considered under another head.

Having considered what the ryots tenure *is not,* it is time to inquire into what it really *is;* and can it, after what has been said, be regarded as any better than a mere *tenancy at will,* or that form of it which has superseded in England the old tenancy at will, a tenancy from *year* to *year?* A tenancy at will, thus defined, is determinable by three things: forfeiture, on the part of the tenant, from nonfulfilment of conditions; eviction from the land, at the will of the landlord; and relinquishment of the land, at the pleasure of the tenant. As to the first and last of these modes of determining the tenancy, they are common to the ryot's tenure in India and that of the tenant at will at home. Does the analogy extend to the third mode—eviction at the will of the landlord? It is quite true that, whereas in England the landlord can evict without any reason assigned, he can only do so in India for nonpayment of rent. But in nine cases out of ten, when, in England, a landlord determines a tenancy at will, he does so by the exaction of oppressive rents. All the incidents, therefore, which attach to a tenancy at will in England attach likewise to the ryot's tenure in Guzerat, except that, in India, the caprice of the landlord has not the same latitude of action as in England. I have here been speaking of the immediate tenants of the government in Guzerat. In the bhagwaree villages, where the

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bhagdars interpose between the government and the tenants, the tenure of the stranger cultivators, or those not belonging to the patel family, and who form so large a proportion of the population of some districts, is in the strictest sense of the term a *tenancy at will.* Indeed they are if possible in a still more precarious position than that of the ordinary tenant at will, for this class of cultivators is subject as it were to the uncontrolled caprice of two landlords; for they may, in the first place, be disturbed in their possession by a change of policy as regards the land, on the part of the government, and, in the next, by any whim on the part of the bhagdar. The ryot, therefore, who has no indefeasible right to his land, has not the stimulus to enterprise and industry which would follow the possession of such a right.

But it may be said that this formidable power in the hands of the government is, after all, merely nominal, and that it is not the policy of the government, in its future dealings with the revenue, to make any alterations in the direction of a rise. This may be so, and we may be sure of it; but the ryots are *not sure of it*, and therefore feel insecure. They do not hold their lands on any specific guarantee that the rent will not be raised, but on a mere vague floating rumour that government has no intention of raising it. But they very naturally wish to know why, if government is really sincere in its intention never to raise the rent, it refuses to concede them some guarantee to that effect. It may be replied, that it would be impolitic in the government to bind itself, seeing that the possible exigences of the future might dictate a departure from its present intentions. But this would only confirm the doubts and strengthen the apprehensions of the ryots, who might well urge that it would be impolitic in them to deal with the soil as if they were

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secure, so long as the government refused to bind itself. Its refusal to do so justifies in their eyes their suspicions of insincerity; for they feel that, if it were really sincere, it would secure them at once, for by doing so it would put itself in no worse position than now, whilst its so doing would be of the greatest benefit to them. Why, then, refuse to extend to them a benefit which would entail no disadvantage upon it? The last alteration made in the assessment of Broach was an average reduction of about half a rupee per beega. But what security have the ryots against a return to-morrow to the former rent? The reduction was made by the collector on his own responsibility, and afterwards sanctioned by the government. But that sanction was given by no public proclamation, nor by an announcement that it should afterwards be received in courts of justice as evidence of the terms on which they held. It was given in a letter to the collector, which may now, perhaps, be found in the cutcherry at Broach, simply approving of the change, but giving no promises as to the future. Is it any wonder then that the ryots should construe the conduct of the government in the matter, in simply contenting itself with professions, into a deliberate purpose, on its part, to reserve to itself a power to replenish its coffers, at any future period, at their expense, and to exercise, in other respects, an undue power over them?

It is quite true that the ryots are not often disturbed in their possession for the non-payment of rent. But if so harsh a proceeding is not resorted to, it is abstained from, to avoid the odium and the hazard of what would sometimes amount to a general confiscation. Government takes credit for its abstinence; but the power in question is one which it could not always have exercised if it would. Had it been strictly enforced within the last ten years, there

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would now be scarcely a cultivator in Guzerat who was an occupier in 1841. And were it to be strictly enforced after this, you would either produce depopulation, or have a new set of cultivators in the province every ten or fifteen years. No farmer can till his soil with any heart, who, being liable at any time to be called upon to pay any rent, no matter how exorbitant, is liable likewise to ejectment from his holding for inability to pay. Is it, therefore, politic in the government to reserve to itself a power which, to speak in plain terms, it dare not use? The natives, who have a most exalted notion of the powers of the government, are fully aware that it dare not attempt to eject them in great numbers; but that does not give confidence to the individual, who is by no means certain that, should the blow fall upon his single head, his fellow cultivators would interpose to protect him.

I trust I have said enough to show the real nature of tenures in Guzerat. From what has preceded, it will be evident that, as regards the cultivators, the *fee simple has no existence* as a feature in the landed system of the province. There are, in fact, no fees simple except the monster and all-devouring one of the government, and the faint reflections of it which are to be found in the hands of the owners of alienated lands. But no cultivator either of government or of enam lands has in reality *any permanent indefeasible* tenure of the soil. View his tenure, and if you do not find it to be a *tenancy at will*, you will at least discover it to be its *counterpart.* So long as this continues, it is vain to expect the ryots to devote themselves to the business of cultivation with that zeal and assiduity which would speedily result in evoking all the productive power of the soil. Until their position is made more secure, they will content themselves with getting from the land as much as will maintain themselves and

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families, and meet, if possible, their obligations to the state. They may also be occasionally stimulated to a little extra exertion by high prices, resulting from a sudden increase of the demand for some of their products. But you cannot expect to see them, as a body, engage in an agriculture exhibiting signs of progressive improvement, until you assure them that the bulk at least of the products of their industry will remain their own. "If we improve the land, you will raise the rent: how do we know that you will leave us any more than you do now, and why should we go to any more trouble for you?" is the substance of the replies they give you when you speak to them of improvement. If you urge that there is no fear of the rent being raised, they remind you of its having not long ago been seriously increased in one collectorate at least, when there had been *no improvement* to serve as a justification for the act. As they have no better guarantee now than they had then against enhancement, and as improvements would only afford an additional temptation to it, they would abstain from them through fear of consequences, even had they more money to lay out in them than they have. That they have no well-grounded belief in the security of their position is evident from the suspicion with which they regard every European who approaches them with interrogatives respecting their circumstances. Unaccustomed to see Europeans, except as connected with government, they look upon every one who interrogates them as a government officer, who means them some mischief. If the resources of Guzerat have been but imperfectly developed; what was to be expected from a race of cultivators, who, instead of holding under permanent or temporary guarantees against disturbance, hold their lands to the present day, as they did in 1826, on a mere *general understanding*, in

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other words, by a title tantamount to nothing higher than a *tenancy at will*,—a tenancy, the evils of which are vastly aggravated in India by there being but *one* instead of *numerous proprietors*. What would be the condition of tenants-at-will in England, if they had but *one* landlord to deal with instead of a *hundred and fifty thousand?*

Such, in their general scope and bearing, are the tenures of Guzerat. Were the lands so held, held at a moderate, or even a nominal rent, the *uncertainty* of the *tenure* would still suffice to cripple the energies of the *tenant*. But if *high rents* are superadded to uncertainty of tenure, what are we to expect but a languid industry and an impoverished people?

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CHAPTER III.

THE ASSESSMENT AND ITS INCIDENTS IN GUZERAT—MACHINERY FOR THE COLLECTION OF THE REVENUE—POWER AND DUTIES OF THE COLLECTOR AND HIS ASSISTANTS—NATIVE OFFICIALS—DIFFERENCE BETWEEN SETTLEMENT AND ASSESSMENT—MODE OF DETERMINING THE SETTLEMENT—CORRUPTION OF NATIVE OFFICIALS—RYOTS' POWER OF PETITION—MODE OF COLLECTING THE REVENUE—BHAGWAREE, BEEGOTEE, AND TALOOKDAREE SYSTEMS OF TENURE—ASSESSMENT IN BROACH, IN SURAT, IN KAIRA, AND IN AHMEDABAD—VALUE OF PRODUCE OF BROACH—MAJOR WILLIAMS' ESTIMATE—VALUE OF PRODUCE OF KAIRA AND OF SURAT—ASSESSMENT IN COTTON LANDS—RENTAL IN ALIENATED LANDS AND IN NATIVE STATES—KIRKLAND'S ASSESSMENT—OUTLAY AND RETURNS IN BROACH—CULTIVATOR'S PROFIT—LAND HAS NO SALEABLE VALUE—REMISSIONS—EFFECTS OF REDUCED TAXATION—SEVERAL CROPS IN ONE YEAR—COST OF COLLECTING THE REVENUE—RECAPITULATION—NO FARMING CLASS IN GUZERAT—PRESSURE OF TAXATION ON THE INDUSTRY AND ENTERPRISE OF THE CULTIVATORS.

Few subjects have been more prolific of discussion and angry contention than the land-tax of India; which nevertheless continues to constitute the chief feature in the fiscal system of India.

One of the points on which much argument has been expended is, whether the assessment be a rent or a tax. Some have contended for its being a rent, in order that no odium might attach to the government should the assessment equal the rental; whilst others have held it to be a tax, which should, in the main, absorb but a portion of the rental, although, in times of urgent necessity, it might be pushed even beyond it. But it matters not to the ryot in Guzerat by what name it may be called, so long as he finds so much of the produce of his labour and capital is annually abstracted from him.

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Before adverting to the nature and extent of the assessment in Guzerat, it may be as well first to give a general idea of the official instrumentality by which it is collected.

The head-quarters of the collector is known as the civil station of the collectorate. The collector, who is the highest civil functionary in the district, is invested with large magisterial powers. In criminal cases he can imprison for a year, his civil jurisdiction being limited to such cases as affect the revenue. He is also empowered to imprison revenue defaulters, as well as to attach their property. This power is rarely used; but its effects may be more extensively observed in the struggles which it causes many to make to save their bodies from imprisonment, and their property from attachment, than in the few cases in which it resorts to extremities. It is strange too, that, whilst in England it is a mooted question whether the power of distraint be not a power of which landlordism should be divested, that power and the power of imprisonment should exist together as a feature of it in India.

The next in official rank to the collector are his assistants, two or three in number, as the case may be, who are also Europeans. The superintendence of the collectorate is divided between the collector and his assistants, the district being divided into three parts, each taking a part. The assistants are also magistrates. They have no civil jurisdiction, but are invested with criminal powers extending to the cognisance of cases punishable by three months imprisonment. They may also imprison for any term not exceeding a year, with the approval of the collector. Some of the assistants are of considerable standing in the service, and of great experience; and by them the powers with which they are vested may be moderately and judiciously used. But in too many cases the merest striplings from England are found occupying the magisterial bench, who, though they have not had the least previous judicial train-

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ing, are called upon frequently to adjudicate in cases of considerable importance. As they have no jurisdiction in civil cases even affecting the revenue, so they have no powers of distraint or imprisonment in case of default, it being their duty to submit all such matters to their superiors.

With the assistants terminates the European portion of the collectoral machinery. After them we come to the native officers, the chief of whom is the mamlutdar. The primary fiscal and municipal division of a collectorate is into pergunnas, each pergunna being in charge of a mamlutdar. When the pergunna is very large it is subdivided into mahals, each mahal having at its head an officer known as the mahal-kurry, who is a kind of sub-mamlütdar, and of whom there may be two or three in a pergunna subordinate to the mamlutdar. Both revenue and magisterial functions are devolved upon the mamlutdar, the dues of the government being collected, and the peace of the pergunna maintained by him. His criminal powers do not extend beyond cases punishable by fifteen days' imprisonment, whilst his civil jurisdiction is analogous to that vested in the collector, cases affecting revenue generally originating before the mamlutdar, and being carried from him up to the collector. In dignity, power, and official rank, though not in emolument, the position of the mamlutdar is next to that of the European assistant. His pay is from 100*l* to 150*l*. a-year, whilst his duties are such as must necessarily, if faithfully performed, absorb the whole of his time. The mamlutdar's establishment is considerable, for in addition to the mahal-kurry, when his pergunna is large, he has always several karkoons attached to his cutchery or office. The karkoons are attached to him more in the capacity of clerks than of revenue officers, although occasionally the head karkoon wields a considerable share of his superior's authority.

The next in order among the stipendiary officers of government is the *tullatee*, or the village accountant; hold-

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ing an office which was formerly hereditary, but which, for reasons already assigned, has lately been changed into a stipendiary one. Each village has its tullatee, except when very small, when one tullatee serves for two or three villages. He keeps the records and accounts of the village, and is the first to move in the cumbrous business of determining the settlement for the year. As regards its European officers the Indian government has, and perhaps wisely, proceeded upon the principle of paying liberally for services performed, both in order to secure the co-operation of first-rate men, in a country in which so much depends upon discretion and personal character, and so much also upon the opinion entertained of the ruling class; and likewise to put its servants beyond the reach of temptation, amongst a people so used to corruption as the natives. Is it not strange that, notwithstanding this, it should have ignored, and still continues to ignore, the same principle as applied to its native officers, who are accustomed to see sinister influence brought to bear on most of the transactions of life, who are more exposed to corruption than the European, through whom, when an attempt is made to bribe him, temptation is generally put in the European's way, and who frequently augment their illicit gains by pretending that the greater part of the sums which they extort is to go to the European, whom, of course, it never reaches? Besides the sentiment of honour, which has much influence with the European, he is placed in comfortable circumstances, and is given a stake worthy of retaining as an additional inducement to good behaviour. Why not try the same course with the native? Trust as little to his honour as you please, but give him a stake which it would be a serious matter to forfeit by misconduct. When this is done, it is not often that it is recklessly thrown away. I have been led into these remarks on finding myself about to mention the salary of the tullatee,

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which is from 8*l.* to 15*l.* a year. His duties are multifarious and onerous, and are supposed to absorb his whole time, and his salary is regarded as his entire maintenance, there being no fees of office allowed him. Let it be borne in mind that it was because, under the former system, when his office was hereditary, he had been reduced to a mere cipher, or had become the creature and coadjutor of the patel in oppressing the ryots, his office was changed, and he was placed on his present footing. What is there in the emolument which he now receives to prevent his reverting to something like his old position in regard to the patel, and becoming his mere creature. An additional inducement to dishonesty is thrown in their way, when, as in many of the talookdaree villages of Ahmedabad, their wretched pay is frequently in arrear.

In addition to the functionaries already described there are other officers, who also assist, to a greater or less extent, in the collection of the revenue. The first of these to be noticed is the *dufturdar,* who acts more in the capacity of a clerk and adviser to the collector than of a revenue officer, like the mamlutdar. In addition to giving every information in his power to the collector, it is his duty to prepare and keep native duplicates of the records of the collectorate. He has no particular official rank, but his post is, in point of emolument, the highest to which a native can aspire. In some cases he gets from 500*l.* to 600*l.* a year, and even as high as 800*l.* a year, when connected with the establishment of the revenue commissioner. We have next the old district officers, known as the dessaees and muzmoodars. It is the duty of both to obtain every information respecting the resources and circumstances of every villager of the district. For services formerly performed by them they held a large share of the passaetee lands already described, which they still continue to hold as hereditary property, although their services have been almost dispensed with.

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The annual value of the official rent for lands set apart for district and village officers in Broach is 171,731 rupees. As they still hold their lands rent free, though they scarcely perform any services for them, the government rent, which is foreborne in their case, may be regarded as so much added to the cost of collection. We have last of all the village patel, whose post is one more connected with the village community than with the establishment of the collector. As, however, in one, and that a large class of villages, he is made responsible for the revenue, he is obviously, though in a supplementary degree, identified with the collectoral machinery. In some cases he superadds police duties to his other responsibilities; but in others he has been superseded, as regards his police functions, by another order of patels, known as the mookshee patels, whose duty it peculiarly is to maintain the peace of the village.

In Baroda and other native states the practice is to farm out the revenues, the farmer taking a village, or a number of villages, as the case might be, and collecting the revenue through the agency of those whom he may deem most suitable for his purposes.

Such being the machinery employed in the collection of the revenue, I shall now proceed to describe, as briefly as I can, the mode in which it operates in determining the annual settlement. To prevent confusion, it will be necessary to bear in mind the difference between the *settlement* and the *assessment*. Where assessment is permanent, or the rent is fixed at a moderate rate for a number of years, without remissions, there is no such distinction as that which obtains between settlement and assessment, where the rent is high, and not fixed for any period, but is understood only to have a certain maximum rate, and where remissions are granted wherever a case for them is made out. In that case the assessment, at its understood rate, that is, understood by the government, and the settlement, may be two

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very different things: the object of the annual settlement being to determine whether it is possible to collect the full rate, and, if not, in what cases and to what extent, the full rate should be departed from.

With the rains the cultivating season may be regarded as commencing. The first crops put into the ground are those known as the monsoon crops, which may be sown in June or July and reaped in November and December. Shortly after the crops begin to appear, and as soon as they indicate the character of the season, it is the business of the tullatee of each village to prepare a statement, setting forth the quantity of land cultivated, the crops which it bears, the proportion borne by each crop to the whole cultivation, the general character of the season, and such circumstances as may in any case call for a remission of rent. In making this statement he is generally aided by their patel, and after it is made it is forwarded to the mamlutdar, the head native officer of the district, with a rough estimate of the sum expected to be realised. If any lands have been thrown up or left uncultivated, it is his duty to report to that effect, and if possible to assign the causes.

On receiving this statement it is the mamlutdar's duty to inform himself of its correctness, and with this view he is supposed to make the tour of his pergunna, ascertaining the circumstances of each village, and thus checking the tullatee's statements. In this, where their services have not been altogether dispensed with, he is assisted by the hereditary district officers already alluded to, whose knowledge of the district is supposed to aid him materially in seeing that, whilst the ryots are not oppressed, the government is not defrauded. On receiving the statement of the tullatees, and ascertaining as far as possible their accuracy, the mamlutdar and the district officers, taking all the circumstances of the district into account, fix the jumnabundy, or settlement, subject, of course, to the approval of the collector.

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Some time later in the season, after the monsoon crops have been reaped, and the autumn crops are far enough advanced to indicate their probable yield, the collector and his assistants go into their respective districts. The statements framed by the tullatee and district officers are then placed before them, and after they have satisfied themselves of their correctness, they take the circumstances of the present and the payments of former years into account, and finally determine the settlement for the season. In Guzerat the collector and his assistants generally go into the districts about the month of November, and are frequently engaged as described until late in February, when the cotton crop, which is planted early after the first fall of rain, is verging to maturity. The settlement for each village is supposed to be made at the place most convenient for the villagers; and when it is made, the tullatee returns to the village, and informs the inhabitants of the sum which each has to pay, when the village is settled on the beegotee principle, and of the sum total, which, in case of a bhagwarree village, is to be taken from it; whereupon it is the business of the bhagdars to distribute the aggregate amongst the different shareholders and other tenants, according to the usages and customs of the village. Such is the manner in which the settlement is annually made. If the season be an ordinary one, or one unusually favourable, the settlement will vary but little, if at all, from the full rate of assessment which the land is understood to bear; but should the season be unfavourable, and there be claims for remissions on account of failure of crops, in proportion as it is unfavourable will be the extent to which the revenue to be realised from the land will vary from the maximum rate of assessment.

It cannot fail to strike every one, that a system like this, unless the agents employed throughout are of unim-

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peachable integrity, must be a prolific source of fraud, corruption, and oppression. At the commencement of the year the ryot cannot tell what he will have to *pay*, nor the government what it will have to *receive*. The ryot may be aware that there is an understood rate beyond which the demands of the collector, of his own accord, cannot go, but he does not feel certain that the collector will not be *empowered* to demand more. If the season be favourable, he will have to pay the current rate; if unfavourable, a deduction will be made accordingly. It is not till nearly the close of the season that he can tell what deductions are to be made in *his favour*, or the government what remissions must be made to *its loss*. It is whilst this is being ascertained, as the season progresses, that a door is opened to every species of underhand transaction.

It is, in the first place, the business of the tullatee, aided generally by the patel, to frame an estimate of the growing crop, and the circumstances of the season, with a view to its being ultimately determined by the collector what each cultivator has to pay. It is clear that, whilst it is the object of the government to *get as much* as it can from the ryot, it is the interest of the ryot to *pay as little* as possible to the government. Acting in the interest of the one, the tullatee will certainly under-estimate the crop; acting in that of the other, he is likely to over-estimate it. Unless he be actuated by honest principles, which will lead him to deal justly between the parties, his course is sure to be decided by a balance of interests. No native confers any favour upon another without a consideration; and if he favors the ryot, it will be for some pecuniary recompense. In a large village a corrupt officer may thus annually realise a considerable sum at the expense of government; but which, as it only pays him perhaps 10*l.* a year, can scarcely expect better treatment at his hands. Discovery

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is of course followed by loss of situation; but the post at stake is not one of sufficient emolument to bribe him to be honest.

It is said that the supervision of the European functionaries is a check upon the conduct of the native officials; but the extent and multiplicity of their magisterial duties render it utterly impossible for them to give that attention to details in revenue matters which is desirable. In illustration of this, take the case of the acting first assistant in Ahmedabad, whom I found in charge of the revenue and criminal business of the pergunnas of Dholka and Verungaum, and of the criminal business of Dundooka and Gogo besides. The whole length of his district was about 150 miles, his revenue charge extending over about 1300, and his criminal jurisdiction over about 2500 square miles. The result was as might be expected. A door is thus left open, at least, for every species of underhand work on the part of the mamlutdar's dessaees and other officers.

This may be regarded as rather a harsh picture of Indian society, but it is nevertheless true. In its interior economy it is replete with most of the vices which characterise social life, under native rule, in the East, and particularly so in Guzerat, where circumstances are still permitted to exist which tend to perpetuate and even aggravate them. The relation between the government and the cultivator are of an uncertain and indefinite character, and where opportunity offers, as already shown, of defrauding the one and oppressing the other, the door is left wide open for every species of corruption and annoyance, whilst those who can profit by it are not slow to take advantage of the circumstance.

Much has been said of the power of petition conceded to the ryots, and of the extent to which it is taken advantage of. But this power is less resorted to as a protection

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against local exaction and annoyance than as a means of securing a relaxation of the government demands. These petitions are first presented to the collector when he is out in the district; but as his circuit is extensive and his time limited, they necessarily receive a very general attention.

If the ryot be dissatisfied with the primary decision on his petition, he can appeal to the revenue commissioners. There are but two commissioners in the presidency, exclusive of Scinde. The one for the northern division has the supervision of an area which is close upon 26,000 square miles, with a population of upwards of three millions and a half; whilst the charge of the other extends over 34,670 square miles, with a population of nearly five millions. Were the duties of the commissioners confined to hearing appeals, it is questionable if they could do justice to more than a portion of them. But their duties are multifarious, leaving them only a portion of their time to devote to their judicial functions; and therefore most of the cases forwarded to them by way of appeals are referred back to the collectors from whose districts they come to be reported upon by them, and according to the reports returned are the appeals generally decided. From the revenue commissioner an appeal lies to the local government. It is said that this power of appeal is taken advantage of to a very great extent; but it is, after all, insignificant out of a population of nearly nine millions.

Having shown the process through which the annual settlement is determined, it is now time to consider the manner in which the revenue is collected.

Throughout one half at least of British Guzerat the revenue is collected in money, such being the case in the collectorates of Surat, Broach, and Kaira. Throughout Ahmedabad, on the other hand, which is about equal in area to the three taken together, the practice is still, as it

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is in the Guicowar's states, to collect the rent in kind. Indeed, until the past year, when means were taken to introduce the money assessment into 175 villages of the collectorate, the beegotee system having been previously introduced into 92 villages, the rent was almost entirely, although in different ways, levied in kind. The villages in question were to pay a money-rent for the first time during the present year, the intention being to extend the same system to the whole collectorate as soon as practicable.

Where a money-payment is imposed, the principle is, generally speaking, to rate the land with exclusive *reference to its quality*, leaving the holder at liberty to cultivate what crops he pleases;—I say generally speaking, for, strange to say, notwithstanding the evidence so confidently given to the contrary, the *principle of levying the rent according to the crop has not yet been altogether abandoned* even in *Guzerat*. It still exists in the vicinity of Bombay itself, in that part of the collectorate of Surat which is nearest the presidential city, and embracing altogether 54 villages. Supposing each, on an average, to contain 1000 people (not a high estimate), we have from fifty to sixty thousand people still liable to this mode of assessment. It also prevails in Mandvee, which recently lapsed to the British government for want of heirs. Though this was expected for some years before, no preparation was made to put its fiscal affairs on a better footing, whenever it should come into our hands, nor am I aware that it has yet been put under the regulations. Taking this newly acquired pergunna, with the village already mentioned, we must have about 100,000 people, or about one-sixth of the entire population of the collectorate, still subject to this obnoxious fiscal system.

But throughout a large proportion of the collectorate of Ahmedabad also the system of levying a share of the

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actual crop still exists; and until the present year nothing was done to put an end to this or to any of the other objectionable modes of assessment so notoriously prevalent in the collectorate.

There are many who, from various considerations, give a preference to rents in kind. There can be but little doubt that, when the principle acted upon is that of a high assessment, as when half the produce is taken, rents in kind may have much to recommend them over fixed money-rents. They fluctuate with every change in the cultivator's circumstances, always leaving him the same proportion of his crop, whether it be great or small. But were the assessment reasonable and moderate, the ryots would, for obvious reasons, prefer to pay a fixed money-rent. In Baroda, where rent is taken in kind, and half the produce at least is generally abstracted from the ryot, it is sometimes the practice, when the crops are short, to demand a money-payment from him, to the value of perhaps two-thirds of his whole crop. But, as already shown, the farming system prevails here; and it is seldom indeed that the transactions of the revenue farmers with the ryots are looked into, provided the dues of the state are punctually met. This system of levying the rent in kind is not only obnoxious to the ryot, but is also highly inconvenient to Government, from its having to receive produce in payment, and then to dispose of it in the market. The mode of appraising the crop is also highly objectionable. Though a business of importance, it is, frequently to some extent, under the management of native officials, with incomes of *5l.* to *6l.* a year; and hence there is ground afforded for unfairness and fraud, which it is difficult to bring home to the delinquents.

The hullvero system, already described as a tax in the lump on as much land as a man is capable of cultivat-

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ing with a pair of bullocks in a plough, is also vexatious, from the inquisitorial character which it assumes, the ryot's actual means being the basis of the assessment. To ascertain what he has to pay, whether for two ploughs or for one, or half a plough, his means have to be inquired into, the inquiry affording a fertile source of dispute and underhand dealing.

Such are some of the methods of realising the government revenues from land in the collectorate of Ahmedabad. It is calculated that there are at least sixteen different modes of levying the rent in operation throughout the collectorate, three or four of which may sometimes be found to exist in one and the same village, there being some mixture or other in most villages. Such is the account which we have to render of our stewardship, after about thirty years' occupation of the district.

Reference has already been made to the bhagwarree system of tenure; and I now propose briefly to show the results to the cultivator of collecting the revenue under that system.

We have already seen that, in the share-villages, the patels or bhagdars are responsible to the government for the rent of the village. It is with them, and them alone, that the government treats, assessing the village at a gross sum, and leaving the bhagdars to apportion it amongst the villagers according to the customs and usages of the village. Whilst this is the prevalent system in Broach, it exists, as formerly intimated, to a considerable extent in Kaira and Ahmedabad. The first business of the bhagdars under it is to realise the government revenue; the next to enrich themselves as much as possible at the ryot's expense. Under the head of tenures, I have shown that there are, generally speaking, two classes of tenants in the share-villages,—those who belong to the patel family, and the stranger cultivators; the tenure of the former being

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secure against the encroachments of the bhagdars, so long as they pay their respective shares of the assessment; but that of the latter being, in most cases, entirely dependent upon the will of the bhagdars. They are not only at the mercy of the bhagdars, as to the duration of their holdings, but also as to the terms on which they are to hold them. Thus the bhagdar may let lands to them either at the government rent, or at a rate in excess of the government rent. The extent to which the government rent is thus exceeded depends upon circumstances. It is sometimes twenty, sometimes twenty-five, at other times fifty, and at others cent per cent higher. In Kaira instances have been known of two and three hundred per cent in excess of the government rent being demanded and paid. In such cases the land must have been very good, and favourably situated either for irrigation or for markets. When they cannot get an excess in the shape of money, they sometimes get its equivalent in labour out of the tenants in question. The position then of the bhagdars is frequently this: they make up, in the first place, the rent for which they are responsible to government, from their different classes of tenants, exacting from those in their power an excess of rent, which not only enables them, in many cases, to hold their own private lands virtually free of rent, but to pocket a surplus, at the same time that, by exacting labour from those from whom they can get no money in excess, they get cultivated free of expense the land which they already hold virtually free of rent. It is certainly not in all cases that the bhagdar is able to make so good a thing of it as this; but it is rare indeed to find him, in his exactions, stopping short of the ability of the tenants to bear them.

It is very obvious, then, that the amount of the government rent does not always indicate the amount of actual *pressure* upon the cultivator. When we hear of so much

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only being paid to government per beega or per acre, we are not to suppose that that is all the rent which the land is made to bear; nor is it solely in the share-villages that we find an excess of rent paid by the land over and above the government assessment; for the same thing exists to some extent in the beegotee villages, when the beegotees sometimes sub-let their lands on the best terms they can make with their sub-tenants.

The system here pointed out is upheld by many on the ground that the bhagdars are landlords, occupying an intermediate position between the government and cultivator; but in reality they are merely farmers of the revenue, or middlemen, with power to exact oppressive rents from the tenants, but with no inducement to show any consideration towards them or their interests.

Under the beegotee system, as it is at present regulated in Guzerat, the result to the cultivator is the same when he happens to be the sub-tenant of one of the beegotee holders. At the first blush, the relation of landlord and tenant would appear to be established between the two; and so far as that the one *pays* and the other *receives* rent, it is so, but no further; for although the landlord may have a substantial tenant, the tenant has only a receiver of rent, but no real landlord. The beegotee tenant's own tenure, like the bhagdar's, is so insecure, that he cannot perform the duties of a landlord either to his tenant or his land. Feeling himself, whatever government may think, in no better position than that of a mere tenant at will, his interest being liable to be at any time determined by the act of the superior landlord, he of course contents himself with making as much as he can out of the land whilst he holds it, taking care not to embark in improvements, the advantages of which he might never reap. Both in the bhagwaree and beegotee systems,

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as the latter exists in Guzerat, there is but one landlord—the government—the bhagdar and the beegotee tenant, when the latter sub-lets his land, being mere middlemen between the government and the cultivators, who grind the ryots without benefitting them in any manner, and who are permitted to do so without inquiry or interference so long as they meet their obligations to government; whilst the civil courts are ready to aid them in improving the bargains which they are enabled to impose upon their tenants.

It may be urged in favour of the bhagwarree system, that it has been the means of reducing a great deal of waste land to cultivation. When large tracts of waste existed about a village, the government, exacting as much as could be drawn from the cultivators of the land already reduced, left the bhagdars to make their profits out of the waste. This they did by introducing a new set of cultivators, from whom they could exact what they pleased over and above their dues to their government. But whilst the system thus tended to extend agriculture in one direction, it depressed it in another. If it brought more land into cultivation, it did not stimulate to the improvement of the land already cultivated. It has thus extended the area of a languid agriculture, instead of quickening the industry already in existence.

Under the talookdaree system, as prevalent in the southern pergunnas of Ahmedabad, the same uncertainty obtains as to what the cultivator really pays. Tullatees, it is true, are appointed to check any oppression on the part of the talookdars; but they are so miserably and so irregularly paid, that they sometimes become the most active oppressors themselves. The talookdar pays seventy per cent of the revenue to the government, and keeps thirty to himself; but how much more than the revenue he sometimes collects is not very easy to determine. Most of the

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talookdars, through extravagant habits, are deeply in the power of the money-lenders, which affords them an additional incentive to oppression wherever they can indulge in it.

In dealing separately with the different branches of the subject, I now come to consider the *amount* of the assessment. In so doing I shall first allude to the extent of its pressure in Broach.

The whole number of beegas in cultivation throughout this collectorate last year was 1,206,849, on which the gross revenue was estimated at 22,67,255 rupees. The realisable revenue, however, was only 16,07,256 rupees; the difference of 6,60,000 rupees being the sum which the alienated lands *would* pay if rated at the government rate of assessment. The *realisable* revenue is the amount obtainable from the government lands, together with the quit-rents payable by the alienated lands. The area of the government lands in cultivation, from which the full rates of assessment were drawn, was 757,000 beegas, or about 60 per cent of the whole cultivated surface. To ascertain the pressure of the land-tax upon the government lands, we must deduct from the realisable revenue the amount of the quit-rents paid by the alienated lands. There were paid last year as—

	Rupees.
Quit rents, or alienated lands, in government villages .	89,207
„ paid by *alienated villages*	32,958
Total	1,22,165
To which must be added :	
Ground-rent on salt-pans	5,071
Making in all . . .	1,27,236
Which, deducted from .	16,07,256
Leaves	14,80,020

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as the whole sum realised from the government lands paying full assessment. This sum divided by the number of government beegas in cultivation, gives about two rupees per beega, or about 8*s*. sterling per acre (the Broach beega consisting of 2477 square yards, or a fraction more than half an acre), as the average assessment on the government lands. This, however, includes all lands, those highly as well as those lowly assessed, from garden lands, paying on an average six rupees per beega, to pasture lands, paying an average rent of three quarters of a rupee per beega. So far as the general question of its agriculture is concerned, two rupees a beega may be taken on the average rental of the government lands in Broach; but so far as the cotton-growing lands are concerned, this sum is a little above the average. To determine the rental of the lands producing, and capable of producing cotton, we must, in addition to the deductions already made from the realisable revenue on account of the alienated lands, make other deductions for such other lands as are not included within the cotton-growing area of the collectorate. These are,

	Area in beegas.	Aggregate assessment rupees.
Rice-lands, with an average assessment of 4 rupees per beega	10,563	42,252
Islands and farms in rivers estimated at about 3 rupees per beega . . (about)	8,000	21,964
Garden-lands, averaging 6 rupees per beega .	2,336	14,016
Pasture-lands, averaging ¾ths of a rupee per beega	33,680	25,260
	54,579	1,03,492

By deducting these figures from the number of beegas of government lands of all kinds under cultivation, and

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from the realisable revenue from the same, we have 703,086 beegas as the area of the government lands capable of producing cotton, and 13,76,528 rupees as their realisable revenue; in other words, an average rental on the cotton-growing lands of 1 rupee 15 anas per beega (7*s.* 9*d.* sterling per acre). But it would be a mistake to suppose that this represents the average government rental of the land *actually producing* cotton.

The distance of some places from markets, and the difficulty of reaching them, and the poorness of soils in others, tends to throw some land out of cultivation; and hence the production of cotton is confined to the better classes of soils, comprising about five-sixths of the whole area capable of producing it. It is to these five-sixths of the whole area that the rotation of the crop is generally confined; so that, as about one-third of the *whole* area is annually under cotton, it follows that the lands actually cultivated with it are made to produce it two years out of five, instead of two out of six. Taking the remaining sixth (117,181 beegas), on which cotton is not usually grown, at, say, three quarters of a rupee below the average, we have 12,30,757 rupees as the rental annually paid by the five-sixths (585,905 beegas) actually producing cotton, which gives about 2 rupees and 2 anas as the average rent per beega (8*s.* 6*d.* per acre) in Broach.

In Surat the average assessment on the actually cultivated lands is much higher. The entire area of the British portion of Surat is about the same as that of Broach; but the cultivable surface of the former is somewhat less than the actually cultivated area of the latter. The extent of the government lands cultivable in Surat is 991,381 beegas, of which there were in *occupation* in 1849-50 about 748,812 beegas, the Surat beega being one-eighth larger than that of Broach. But of these there

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were only 426,799 beegas actually cultivated, the remainder being either pasture or fallow lands. Of this residue considerably more than half may be taken as lying in fallow, leaving, say 122,000 beegas in pasture, for which an average rent of about three-fourths of a rupee per beega will be paid. Adding this to the 426,799 beegas actually cultivated, we have 548,799 as the number of beegas paying full assessment to government. The total realisable revenue of Surat in the same year was 19,36,695 rupees; from which deducting 2,70,487 rupees for the amount of sugar duties, and 73,669 rupees for quit-rents from alienated lands, we have 15,92,539 rupees as the total realisable revenue of the year from the government land paying full assessment. This, divided by the number of beegas in occupation and paying rent, gives 2 rupees 14 anas as the average rate per beega. But to compare this with the Broach assessment, we must make a deduction of one-eighth from the rent of the Surat beega, which is that much larger than the beega of Broach, leaving 2 rupees 8½ anas as the average, or about 10*s*. sterling per statute acre. This, however, includes the very high assessment on irrigated lands producing rice and sugar-cane, and comprising about 25,000 beegas. The assessment of Surat has a very wide range from its maximum to its minimum, the former being 18 rupees, and the latter 8 anas, or half a rupee, per beega. It may be objected that the fallow lands which are extensive are here excluded, which was not the case in the calculation for Broach. But the fallow lands of Broach are of but trifling extent, whilst it is seldom that a field is left fallow for more than one season. It is very different in Surat, throughout a great portion of which the land is of so peculiar a quality that it has to be left fallow for seven years out of ten, to maintain its productive powers. It is thus common in Surat

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to find men holding much more than they cultivate, reverting, after they have exhausted a particular portion of their holdings, to that part of it which has been left waste for years. Thus, although he may hold fifteen beegas, he may cultivate only eight, two of the remaining seven being perhaps grass land, and the other five waste for years. The burden of the assessment will fall upon the ten beegas in cultivation and grass. This is chiefly the case in the bulk of the collectorate lying south of the Taptee, the soil of the pergunnas to the north of that river, and between it and the Broach boundary, being very similar to that of Broach, and, in most cases, similarly dealt with.

To the north of the Taptee the cotton-growing district of the collectorate is chiefly confined. There is also some grown on the south bank, in the immediate neighbourhood of the city of Surat; so small, however, is the quantity produced, that the average number of beegas under cotton cultivation during the five years ending 1849-50 was under 45,000. Last year the number was a little above 70,000 beegas. The three pergunnas in which it is most raised are Oolpar, Khorsud, and Chorassee:

	Beegas.
The cultivable area of the first, exclusive of the alienated lands is	89,633
„ „ of the second . . .	100,176
„ „ of the third . . .	30,000
In all . .	219,809

the proportions of the revenue contributed by them in 1849-50 being:

	Rupees.
By Oolpar	2,42,662
„ Khorsud	2,20,140
„ Chorassee	1,26,319
Total .	5,89,121

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		Rupees.
But of this Oolpar pays, in the shape of quit-rents	.	5,266
„ Khorsud „ „ „	.	18,648
„ Chorassee „ „ „	.	24,645
In all .	.	48,559

which, deducted from the gross sum given above, leaves 5,40,562 rupees as the amount paid by the lands liable to full assessment in those pergunnas. From this, however, in order to ascertain the pressure of the rent on the cotton-growing lands, are to be deducted the amount paid by the cultivated lands not producing cotton, which are, as in Broach, the rice, garden, and pasture lands, there being no island and river farms, as in that collectorate. The amount paid by the lands classified under the four different heads in Broach is close upon one-fifteenth of the whole sum paid by the lands liable to full assessment. But as in this case a reduction can only be made under the three heads mentioned, let us suppose the sum paid by the rice, garden, and pasture lands to be one-seventeenth of the gross sum paid by the lands in question, after deducting the payments on account of alienated lands. This gross sum is, as above stated, 5,40,562 rupees; deducting one seventeenth from which will leave 5,18,765 rupees as the whole sum paid by the cotton-producing lands. About the same deduction has to be made from the number of beegas in the pergunnas in question paying full assessment, which is, in round numbers, 220,000, leaving 207,000 beegas as the extent of their lands capable of producing cotton. The sum paid by such lands, divided by this number of beegas, gives about 2 rupees 8 anas as the average rental per beega. Deducting one-eighth from this, to reduce it to the standard of the Broach beega, we have about 2 rupees 3 anas as the average rate paid per beega, being about 8*s*. 9*d*.

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sterling per acre. This is about twelve per cent higher than the average rate on the lands capable of producing cotton in Broach, which, as already seen, is 7*s*. 9*d*. per acre; but it must at the same time be borne in mind that the cotton-growing lands in Broach are in the main of a better quality than those of the pergunnas in question.

But it is not simply as compared with Broach that we discover an inequality unfavourable to the Surat cultivator; for if we compare the pergunnas alluded to with one another, we shall find the weight of taxation in them to be unequal. The pergunna of Chorassee, although in area but about *one-third* the size of *Oolpar*, and *not* one-third of Khorsud, contributes *more than half* as much as either to the revenue. A calculation based upon the same terms, and with the same deductions as in that heretofore made, gives 3 rupees 6 anas as the average rental of land in Chorassee; which, reduced to the Broach standard, is equal to about 3 rupees per beega, or 12*s*. sterling per acre; and which, as compared with the pressure of taxation on the cotton lands of Broach, shows a difference of upwards of fifty per cent as against the Chorassee cultivator.

In Kaira, the total extent of cultivable land in 1849-50 was as follows:

Khalsa or Government Lands.

	Beegas.
Irrigated	23,647
Unirrigated	598,437
Rice	69,671
	691,755
Alienated lands	591,013
Total	1,282,768

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Of the cultivable *government* lands, the extent cultivated in 1849-50 was 449,571 beegas, paying a rental of 10,60,540 rupees; being an average of nearly 2 rupees 6 anas per beega, or, reduced to the Broach standard, about 2 rupees 2 anas, or 8*s*. 6*d*. sterling per acre. As not more than the one hundred and twentieth part of the land of this collectorate produces cotton, it is unnecessary to pursue the inquiry respecting it any further.

From the extraordinary jumble of confusion presented by the revenue system of Ahmedabad, it is very difficult to arrive at an exact estimate of the average pressure of the land-tax upon it. The rental received by government is about 12 lacs annually; but this does not include the 30 per cent of the revenue of the talookdaree villages, which is reserved by the talookdars; and which, added to the government receipts, would, considering the number of their villages, add considerably to the annual rental; whatever may be the principle acted upon, at least half the produce is practically taken from the cultivator in Ahmedabad. In respect to the proportion taken, Ahmedabad can never be said to have been in a better position than Kaira; and it appears that when rent was taken in kind, in the latter as much as half, and even two-thirds, of the produce was frequently taken, whilst the money assessment which now prevails was fixed on the principle of taking one-half. It is not too much, therefore, to say of Ahmedabad, where rent is still taken to so large an extent in kind, that as much as one-half at least of the produce is abstracted from the ryots.

From want of the precise average money rental of Ahmedabad, I am unable to state the average pressure of the land-tax in the four collectorates; but in Kaira, Broach, and Surat it is a shade above 2 rupees 3 anas per beega of the Broach standard, or close upon 8*s*. 9*d*. per acre.

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Little as this may seem in itself, it can only be properly judged of by comparing it with returns. It has been estimated by some, having the best opportunities of judging, that in an unfavourable year it requires 20 Broach beegas to produce 2½ bhars of 960 lbs. each = 2400 lbs. of kuppas, or seed-cotton; which is taken, on the average, as the quantity necessary to produce a candy of clean cotton weighing 784 lbs. In a very favourable year, it is said that from 14 to 16 beegas will yield the quantity of kuppas necessary to produce a candy of cotton. If we take 16 beegas as the number required for this purpose, on the average of years we have 150 lbs. of seed-cotton, or, taking the proportion between it and clean cotton as three to one, 50 lbs. of clean cotton as the average produce of a beega. Now the price of a bhar of kuppas averaged, for the ten years ending 1849-50, a little under 31⅓ rupees, including the high prices of 1840-1. Taking 31 rupees, which is close upon the average, we have 77½, or say 78 rupees, as the average price of 2½ bhars of kuppas, the equivalent to one candy of cotton of 784 lbs. = about 2⅜*d.* per lb. of cotton. Fifty pounds of cotton at 2⅜*d.* per lb. will give 9*s.* 10¾*d.*, say 10*s.*, or 5 rupees, as the average value of the cotton produced by a beega.

Taking one year with another, the quantity of government land annually producing cotton in Broach is about one-third, or say, in round numbers, 34 per cent of the whole area of the government land under cultivation. It is likewise estimated by some, who have not been without opportunities of judging, that the crop of cotton produced by this 34 per cent is *equal* in *value* to the different crops produced by the remaining 66 per cent. Perhaps this estimate is not very far from being correct; but if we assume its aggregate produce to be in value 50 *per cent more* than that of the lands under cotton, surely no one can quarrel

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with the estimate. The 34 per cent and the 66 per cent will therefore, as regards the value of their productions, stand towards each other as 1 to $1\frac{1}{2}$; in other words, assuming the value of the produce of the 34 per cent to be 100, that of the 66 per cent will be 150; thus the average yield of each beega of the 66 per cent is only three-quarters of a rupee for each rupee produced by each beega of the 34 per cent. We have already seen that 5 rupees per beega is the value of the produce of the latter, so that $3\frac{3}{4}$ rupees per beega will represent the average value of that of the former. The whole area of the government land under cultivation is 757,000 beegas, 34 per cent of which, or 254,000 beegas at 5 rupees per beega, and 66 per cent, or 503,000 beegas at $3\frac{3}{4}$ rupees, gives 31,56,250 rupees as the whole aggregate value, which, distributed over all the land, gives $4\frac{1}{6}$ rupees, or 4 rupees 3 anas, as the average value per beega of the whole.

That I have not under-estimated the value of the produce of the 66 per cent of the land will be obvious, if from no other, from the following consideration. I have divided the land into two unequal parts of one-third and two-thirds, and have set down the value of the produce of the latter at half as much again as that of the former. This is the same as if I had divided it into 3 equal parts and represented the produce by $2\frac{1}{2}$, the first two-thirds contributing four-fifths in value of the whole produce, and the remaining third the other fifth. Now the lands being classified by government for revenue purposes, the highest rates are taken, of course, from the best lands; and I venture to say, that it will hold good of every collectorate in Guzerat, that *two-thirds* of the land furnishes *four-fifths* of the revenue. If this be so, the government classification, which is based upon the productiveness of the land, bears me out in my estimate.

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Still further am I borne out by one whose evidence is ever cited with a kind of stereotyped respect by the India House, and by Indian officials, both at home and abroad; I mean Major Williams, whose survey of Broach, more than thirty years ago, still forms the basis of its assessment. In speaking of the productions of the pergunna of Jumboosar, in 1817-8, he sets down the kuppas or seed-cotton at 7468 bhars, which, at the inordinately high price of 67¾ rupees per bhar, produced 5,05,957 rupees. The extent of land under cultivation is stated to have been 118,590 koombas, the koomba being to the acre as 96 to 100. The season having been very prolific, eight dhurrees (of 48 lbs. each) of kuppas are given as the produce of each koomba; so that the whole number of koombas under cotton was 18,670, leaving 99,920 koombas available for other purposes. Major Williams then estimates the value of the grain crops produced by this residue, allowing an average of ten maunds (of 40 lbs. each) of grain to each koomba, which he values, taking one kind of grain with another, at three-quarters of a rupee per maund, or twelve rupees per *kulsee* of sixteen maunds, or 640 lbs. The whole value of the grain crop thus ascertained is set down at 7,49,407 rupees, making the total value of all the produce of the pergunnas 12,55,364 rupees. It thus appears that, although less than one-sixth, say sixteen per cent, only of the whole producing area was under cotton, that 16 *per cent* yielded, in point of value, about 40 *per cent*, or two-fifths of the entire produce of the pergunna. But the price of kuppas was then extremely high; for the same quantity at the average price of the ten years ending 1849-50 would only produce 2,36,184 rupees. Grain has also fallen in value since the period in question, but by no means to the same extent as cotton. Taking the average value per kulsee of all kinds of grain at nine instead of twelve

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rupees (this would be the bazaar price, not the price paid to the cultivator as in the case of kuppa), and we get 5,62,056 rupees as the value of the quantity produced. At the prices of the present day, therefore, we should have 7,98,240 rupees as the value of the whole produce, cotton and grain, of which nearly 30 per cent would be the value of the cotton; so that, at present prices, we should have about 30 *per cent*, or nearly *one-third* in value of the whole produce, yielded by 16 *per cent*, or less than *one-sixth* of the cultivated surface. This is far higher than my calculation, which allows only *two-fifths* of the produce to *one-third* of the cultivated surface. I cannot but think, however, that Major Williams erred in allowing an average of only ten maunds of grain of different kinds to a koomba, especially in a year said to have been prolific. The average produce per beega in Broach of grain of all kinds is about eight maunds, which would give about fifteen maunds to the koomba, instead of ten, as he allows it. At this rate, the number of maunds would be 1,498,720, which, at nine rupees per kulsee, would yield 8,43,030 rupees, making the whole value of the grain and cotton 10,79,210 rupees. Of this, the value of the cotton would be still above *one-fifth;* but if we make some deduction from the quantity of cotton produced in a *favourable* year, so as to bring it down to the produce of an *average* year, the proportion of value will stand at about one-fifth. Had the calculation, therefore, been based on present prices and production, about *one-sixth* of the land would have been found yielding about *one-fifth* of the produce, which bears out my estimate of *two-sixths* or *one-third* of the land yielding *two-fifths* of the produce.

It will thus be seen that, by reducing Major Williams' calculation to the standard of present prices and to the present scale of production, I am not only borne out, but

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more than borne out by him in my estimate. If I have deducted 25 *per cent* from his prices as regards grain, I have added 50 *per cent* to the quantity he assumes as having been produced, without which liberal compensation he would not come up to my estimate. It is thus that I find myself sustained by one whom the court of directors cannot laud too highly, and of whom it is the fashion here to speak in terms of conventional respect.

There is no other district of Broach which, in its circumstances, so nearly approximates the collectorate of Kaira, as does the pergunna of Jumboosar, possessing, as it does, a much larger proportion than any of the other pergunnas, of the light rich grain-producing soil, so prevalent in that collectorate. An estimate of this kind, therefore, having reference to Jumboosar, may, with but little change, be applied to Kaira. There is but little cotton grown in Kaira; but its tobacco and wheat will stand in the place of the cotton of Broach. A Broach beega will produce on the average seven maunds of wheat; a beega in Kaira of the Broach standard will yield, say nine or even ten maunds, which at three-quarters of a rupee per maund, is worth seven and a half rupees. But from this, the bazaar price, we may deduct 25 per cent as the retailer's profit, leaving about five and a half rupees as the produce of a beega. This, with the tobacco, which occupies but a very small portion of the whole area, will exceed in value the cotton grown upon the same proportion of the surface in Broach; but this excess is not sustained by the remaining two-thirds of the cultivated government land in Kaira, on which less of wheat and more of the inferior grains are grown. The wheat, being chiefly raised for export, is not generally produced in larger quantities than will supply the external demand. This year the supply both of wheat and other grains was so much in excess of the demand, that

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prices were extremely low, and it was with difficulty the cultivators could realise sufficient to meet the government dues. And this suggests to us that, in a district like Kaira, with but a limited external market, the money value of the produce of a beega does not necessarily keep pace with the quantity produced. Thus, although it may produce, beega for beega, more grain than Broach, the money value of the produce per beega may be less.

To the point of the average value of the produce of a beega in Kaira, I have testimony to the same effect from the mamlutdar of Neriad. He says, that when a cultivator has bullocks, and a man to work for him, he may, on the average, make six rupees per beega; but that the *mass of the cultivators* are so poor that they have to hire not only the bullocks, but most of the implements with which they work, when, from the imperfect cultivation to which they subject the land, they may not average from it more than three rupees per beega. This is said of the *mass* of the cultivators; but suppose it to be true of *one-half* of these, and that the other half all average six rupees per beega, this would give 4½ rupees as the average of the whole, being very nearly the sum at which I have named it for Broach. But as this statement has reference to the Kaira beega, which is one-eighth larger than that of Broach, it gives in reality a somewhat lower average, bringing that for Kaira still nearer that for Broach.

That the average in question will not be too low when applied to Surat, will be evident when we consider the large proportion borne by lands of an inferior description in that collectorate to the whole extent of land in cultivation.

We arrive then at an average return for the three collectorates of 4 rupees 3 anas per beega. If I have been somewhat elaborate in getting at this result, it is be-

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cause I wished to put myself beyond the reach of being met by mere assertion.

With 4 rupees 3 anas then as the average yield per beega of the Broach standard (equal to about 16*s.* 9*d.* sterling per acre), an average *rental* of 2 rupees and 3 anas (equal to 8*s.* 9*d.* per acre), the average of the three collectorates will not appear so insignificant. *The average rental is thus a little more than 52 per cent of the average returns.* The average rental of Broach, which is 2 rupees, is below this, being about 48 *per cent* of the average returns. That of Kaira, which is 2 rupees 2 anas, is 50 *per cent,* whilst that of Surat, which is 2 rupees 8½ anas, is about 59 *per cent.*

We have already seen that, whilst the average rental on all the lands *capable of producing* cotton in Broach is 1 rupee 15 anas, the average upon the lands *actually producing* it is at least 2 rupees 2 anas. With 5 rupees as the average yield per beega, the government assessment in cotton is nearly 43 *per cent* of the *returns.*

But it would be as great an error to suppose that this represents the full burden borne by the cotton lands, as it would be to imagine that the average of 52 per cent represents the full extent of the assessment upon the cultivated lands of all descriptions. So far I have been dealing only with the *government* rent, which I have already shown does not necessarily indicate the *full measure* of the burden which the cultivator has to bear. To the bhagdars, in share-villages, and to such beegotee tenants as sub-let their lands, the cultivator of government land is called upon, with the exceptions heretofore noticed, to pay something *in excess* of the government rent. Broach is the greatest sufferer from this source, where it averages at least 10 per cent of the government revenue.

I have no doubt that I have here estimated the evil in

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question at much below its real amount; for no one but those interested in concealing it can tell the extent to which the screw is thus applied to the unfortunate ryot. Under these circumstances, is it not well that the government should have an independent stipendiary officer in each village, to act as a check upon the bhagdars? but is it not, at the same time, a farce, in appointing him, to put his remuneration at a point which affords him every inducement to league himself with the hereditary authorities of the village, instead of acting as the protector of the ryots?

But we have not even yet arrived at the *real extent* of the burdens upon land in Guzerat. I have, down to this point, dealt only with the *government land;* but vast tracts of *alienated* land in each collectorate have not yet been taken into the account, on which, as I shall immediately show, a higher rent is generally charged than upon government lands of corresponding quality; and the rent upon which depends, as *to amount,* upon the rates charged upon the government lands. Of such land, as before observed, there are 40 per cent in Broach, 25 per cent in Surat, nearly 50 per cent in Kaira; and judging from the difference between its gross and realisable revenues, about the same proportion in Ahmedabad as in Kaira. About one-third of British Guzerat is thus alienated, the land being held by a multitude of proprietors, who let it on whatever terms they please; and generally at rates *above* those paid upon government lands of similar quality. It is not easy to ascertain the precise extent of the excess of rent charged upon those lands; but if we take it at 20 per cent upon the rate of the government rent, we can scarcely be charged with exaggeration.

But we have not even yet arrived at the full average rental of the province of Guzerat. I have thus far confined myself to *British* Guzerat; but my inquiry takes a

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wider range, and embraces the *native states* as well as the *British collectorates.* It is notorious that, in the native states, where the rent is generally taken in kind, the proportion abstracted from the ryot, both for the government and the profits of the revenue farmer, is greater than in the British territory. But here again the land-charges depend upon those in the Company's territories. The rent on government lands is 52 per cent of the returns; that upon both government and alienated lands is about 57 per cent, and it is upwards of 60 *per cent* upon all the lands, both native and British, in the province. It is thus that we are answerable, not for the alienated lands and the lands in the native states being *more highly rented* than our own; for that would be the case however much we reduced their assessment, but for the *general* average of the province being so inordinately high; namely, an exaction averaging on all the lands of the province upwards of 60 *per cent of the entire produce.*

But it may be asked, Why do the cultivators continue in the occupation of the land at such unreasonable rates of assessment? In answer to this question, I cannot do better than quote from Mr. Giberne's evidence. In paragraph 2413 he is asked, "Have you known any districts in which the cultivation has evidently diminished in consequence of the weight of the assessment? to which he replies "I cannot say that I have known of any; they seem stationary; the *ryots* have *nothing else to do but to cultivate; even if they get no profit,* they *must cultivate* their *fields* for food for themselves and families; they are *so wedded* to the country *or village* to which they belong, that they would pay the rent if they could *without gaining a farthing for themselves.*" Again, in paragraph 2505, speaking of the condition of the ryots, he says, "I think it is nothing better than living from hand to mouth; * * * they

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find that they can do *nothing else* but *cultivate the ground;* they can feed themselves and their families whilst the cultivation is going on, and they continue to stay." This is the secret of their endurance. Had they other outlets for their industry, other means of supporting themselves and their families, they would not continue to cultivate the land at rates of assessment having reference more to their helplessness and necessities than to the resources of the soil. But they have no alternative in a large district of country with but one great source of industry open to them, and that absorbing at least 80 per cent of their numbers.

In further illustration of the pressure of the assessment, I shall offer a succinct view of the manner in which it yet presses upon Broach, which has lately been the scene of considerable improvement, and which is generally regarded as, in point of taxation, the most favoured of all the Guzerat collectorates. Before doing so, however, I shall briefly advert to the history of the assessment in Broach.

The beegotee system, based on a fixed money-rate according to the *quality of the land,* was not introduced into Broach until 1837-38. Previous to that, one-half of the gross produce of the land in kind was taken as the government share, though practically it amounted to two-thirds. This was commuted into money-value at the current bazaar prices of the day, and then apportioned equally among all the lands of the village actually under cultivation. The beegotee assessment, after its introduction, was extended over the whole collectorate in about six years. The rates imposed upon the best light soils under this assessment were, on an average, 3½ rupees per beega, equal to 14*s.* an acre, taking the rupee at par. On the black cotton-growing soils, the average was 2 rupees 7 anas per beega,

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or 9*s*. 9*d*. an acre. These were high rates, and fixed when produce, particularly cotton, was high in price, the price for the three previous years having been 56, 47, and 52 rupees per bhar of kuppas, respectively averaging 51⅔ rupees, and being fully 20 rupees, or 65 per cent, above the average of the ten years ending 1849-50. The rates were imposed according to the supposed qualities of the land; but that there was something radically wrong in this assessment is evident from the fact, that, whereas, during the ten years previous to its introduction, the average land revenue of the collectorate was only 15,95,476 rupees, it was, for the ten years during which the new system lasted, about 18½ lacs, showing an increase of 15 per cent upon the average of the previous period. This increase of the assessment was out of all proportion to that of either population or cultivation, for during the nine years ending 1843-4, both population and cultivation scarcely exceeded an increase of 4½ per cent. In 1834-5, although the price of cotton was high, the revenue realised did not exceed 14,02,919 rupees, owing to the extent to which the disasters of the season required that remissions should be made. Mr. Kirkland, whose name has been already mentioned, was then collector, and, on the supposition that prices would be maintained, and that the season would be most favourable, he raised the assessment in a single year from 14 to nearly 23 lacs, being an increase of 63 per cent upon the revenue of the preceding season, and of about 62 per cent upon the average of the nine previous years. The population of Broach must then have been considerably under 250,000; but taking it at that number, the average assessment was upwards of 9¼ rupees for every individual, man, woman, and child, in the collectorate, and upwards of 15 rupees per head of the 60 per cent of the whole population inhabiting the government land; and about 18 rupees per head of the 75 per

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cent of that number constituting the agricultural population on the government land, on whom alone the weight of this assessment fell; and this too with a people to whom about 4 rupees is about equal to what a pound sterling is to an English workman. This serves to illustrate the feeling of insecurity entertained by the ryots as to their tenure of the land; for, although they may be now partially secured against the recklessness or incompetency of a collector, they have no guarantee against action on the part of the government, which, despite of themselves, may render them defaulters as regards the revenue, and thus bring them within reach of legal process, which may lead to their ejection from their holdings. Mr. Prendergast, a member of council, in his remarks on Governor Elphinstone's minute of 1821, observes, that "under the system which obtains in Broach, the cultivators are well protected from any attempt on the part of an ignorant, indiscreet, or oppressive collector." The commentary on this eulogy of the Broach system is to be found in that which has just been related as having subsequently taken place in 1835-6. Mr. Kirkland left the following year; and his successor was of course not desirous of being much behind him as regarded the amount to be collected. We accordingly find, that whilst, during the year 1835-6, that of the increase, the amount was 22,97,458 rupees, it was during the two following years 20,57,410 rupees and 20,44,453 rupees respectively. In the latter year of the two the beegotee system was introduced, when the revenue fell to 13,38,202 rupees; but it rose the very next year to 21,22,178, developing thus early the vices of the new system, founded, as it partly was, upon prices which were not and could not be sustained. The following will show the relation between prices and the assessment for the ten years ending 1843-4.

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Years.	Price of cotton per bhar.	Assessment.
1834-5 . .	56 rupees. . .	14,02,919 rupees.
1835-6 . .	47 „ . .	22,97,458 „
1836-7 . .	52 „ . .	20,57,410 „
1837-8 . .	36 „ . .	20,94,453 „
1838-9 . .	48 „ . .	13,38,202 „
1839-40 . .	33 „ . .	21,22,178 „
1840-1 . .	43 „ . .	17,55,040 „
1841-2 . .	28 „ . .	18,77,970 „
1842-3 . .	30 „ . .	19,38,429 „
1843-4 . .	33 „ . .	17,46,123 „

From 1843-4 to 1848-49 the average price did not rise above 30 rupees, whilst the revenue fluctuated between 19 and 17 lacs. It is evident from this statement that the fall in the amount of the revenue was by no means equal to the declension in prices. The extent to which the cultivator suffered can only be appreciated when it is considered that the price of cotton has a regulating influence upon that of other commodities. When cotton is high, and much of it is raised, the breadth sown in grain is comparatively limited, and its price enhanced. But when from the declension of prices little cotton is raised, the market is glutted with grain, and prices are correspondingly reduced. The following statement will illustrate this:

Average prices for three different periods.

Periods.	Average price of			
	Cotton.	Wheat.	Jowaree.	Rice.
	per bhar.	per kuls.	per kuls.	per kuls.
From 1810 to 1820 (inclusive)	54¼ rs.	16½ rs.	14¾ rs.	13⅙ rs.
„ 1833-4 to 1839-40 „	46½ rs.	17¼ rs.	13⅗ rs.	11¾ rs.
„ 1840-1 to 1847-8 „	30¾ rs.	14 rs.	8⅕ rs.	9¾ rs.

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If wheat formed an exception in the middle period, it was because of its being more subject than the other grains to the exigencies of an external demand. During the two last years of the first period, the revenue a little exceeded 16 lacs; during the second period it averaged above 18½ lacs; and during the third period, when produce of all kinds had sunk so low, it averaged about 18 lacs.

It is no wonder that under these circumstances the beegotee assessment introduced in 1837-8 should have got into disfavour with the people of Broach. So severely did it press upon them, that in 1846-7 no less than 4 lacs had to be remitted: 2½ of rates and 1½ for special causes. In 1847-8 there was also a large remission, and in 1848-9 no less than 5 lacs and upwards had to be remitted. This last year, however, was one of scarcity, owing to a short monsoon. The assessment was rapidly reducing the collectorate to bankruptcy and ruin when the reduction, which took place in 1848-9, through the timely and strenuous exertions of Mr. Davies, saved it from utter prostration.

But how far, even with these reductions, the collectorate is yet in the position it should occupy, the following statement, comparing its average burdens with the returns of the year, may serve to show.

Returns.

Anticipated yield of cotton for last season for the whole collectorate (about) . .	27,000 candies.
The equivalent of this in kuppas is . .	67,500 bhars.
Deducting 40 per cent of this, as grown upon the alienated lands, we have, as the yield of the government lands .	40,500 bhars.
40,500 bhars, at the average of 31 rupees per bhar	12,55,500 rupees.

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Value of other produce, equal to one-and-a-half times the value of the produce of cotton	18,83,250	rupees.
Total returns . .	31,38,750	„

Outlays.

Government rent, exclusive of quit-rents on alienated lands	14,80,020	„
Ten per cent of this, representing excess paid to bhagdars, &c. . . .	1,48,002	„
Cost of cultivating the government lands (757,000 beegas), at 1r. 12a. per beega	13,24,750	„
Total outlays .	29,52,772	„

Balance left to cultivator . . 1,85,978 rupees.

The population of Broach may now be taken at about 300,000, of whom about 75 per cent, or 225,000, may be set down as appertaining to the agricultural class. If from this we deduct 40 per cent for those cultivating the alienated lands, we have 135,000 as the number of agriculturists cultivating the government land, and paying the government assessment. The balance of 185,978 rupees divided amongst these, gives 1 rupee 6 anas, or 2*s.* 9*d.* sterling, to each in the shape of profit, after meeting all the outlays upon the land. Taking five to a family, we have about 7 rupees, or 14*s.* sterling, as the average profit of each cultivator, each holding on the average about 30 beegas, or 15 acres of land. His average profit, therefore, in an ordinary year is a little less than *half a rupee, or a shilling sterling, per acre.*

The position of the cultivator is of course improved when the price of cotton is above the average, and the prices of all other products partake of the advance. But

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on the other hand, when prices are below the average, it is obvious that the farmer *has little or nothing left him after he has paid his rent and the cost of cultivation.* In other words, instead of *realising the profits of a farmer, he simply makes the wages of a labourer.* Even in *average years* his paltry profits will scarcely suffice to pay the inordinate interest owing by him to the money-lender, and which being payable in respect of advances partly made for the purpose of cultivation, should in strictness be added to the cost of cultivation. This, in an average year, would reduce his receipts to the standard of a labourer's wages. It is evident from what has preceded, that if the assessment is a *rent,* the government takes far more than it is entitled to as a *landlord.* If it is a *tax,* it is no light one; for it not only absorbs the whole *legitimate rent* of the land, but in average years nearly the *entire profits* of the farmer likewise.

In further illustration, let us see how the assessment will tell in an average year upon the production of 2½ bhars of kuppas, the equivalent to a candy of cotton; and upon the grain crops produced by the same cultivator.

. As already seen, the number of beegas required for the kuppas is 16.

	Rup.
Rent on 16 beegas: government rent 2r. 2a. + 10 per cent, say 3 anas, charged in excess, as already explained, =2 r. 5 a. per beega	37
Cost of cultivation, as will be afterwards explained, 1r. 10a. per beega	26
Interest on money borrowed, say at 12 per cent . .	3
Total outlay	66
2½ bhars of kuppas at 31 rupees, the average price per bhar=77½ rupees, say	78
Profit to the cultivator	12

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Now the probability is, that a ryot cultivating 16 beegas with cotton, has twice 16 under grain. As this will contain inferior as well as superior lands, I shall assume the average of 1r. 15a., instead of 2r. 5a., as the average rent.

	Rupees.
32 beegas at 1r. 15a. per beega	61
Cost of cultivation, at 1r. 10a. per beega . . .	52
Interest on money borrowed	6
Total outlay	119
Produce of 32 beegas = $1\frac{1}{2}$ times the produce of the 16 producing cotton, taking each of the 16 as producing 5 rupees	120
Profit to the cultivator . . .	1

Total profit, including that on cotton, 13 rupees, or a mere fraction above a shilling an acre.

This calculation, of course, depends as to its result upon the state of prices, being based upon average prices in a year of average production. But when the price of kuppas is above the average, say at 40 rupees per bhar, as it was for some time this year, the profits of the cultivator are, of course, proportionately enhanced. In that case they would stand thus:

	Rupees.
Total produce of 16 beegas of kuppas, $2\frac{1}{2}$ bhars at 40 rupees per bhar	100
Total outlay as above	66
Cultivator's profit	34

The prices of other products would be also enhanced, but not to the same extent. Let us suppose an enhance-

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		Rupees.
ment of 15 per cent, which will give the total produce of the remaining 32 beegas at . . .	138	
Total outlay, as above	119	
Cultivator's profit . .	——	19
Total profit		53

Or upwards of 4*s.* per acre.

But let us reverse the picture, and take a year with prices of all products below the average, and where does it leave the cultivator? And be it remembered, that for one year that kuppas reaches 40 rupees per bhar, it is five years at 30 rupees, and ten years at least at the average of 31, assumed through all the foregoing calculations. On the average of seasons, therefore, it is obvious that the cultivator makes little, if any thing, *beyond the wages of a labourer.*

If such be the condition of the cultivating population of Broach after the reductions which have recently been made, what must it have been anterior to those reductions, when, although the population was less numerous, and cultivation less extensive, the assessment was considerably higher? What must it have been from the time of Kirkland's assessment in 1835-6 to the introduction of the beegotee assessment in 1837-8, and from that time till 1848-9, a period of fourteen years, when the assessment was on the average 28 per cent higher than during the previous nine years; although for the greater and the latter part of that period, from 1840-1 to 1847-8, the average price of cotton was only 30¾ rupees per bhar, the prices of other products being of course low in proportion? Of the disastrous latter years of that period it is true not only to say, that after the payment of rent, and of the wages of labour, *absolutely nothing was left to the cultivator,* but also that his returns *did not suffice to pay his rent* and *the wages of labour.* In

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other words, the Broach farmer during those years was, after paying his rent, *in a worse condition than a labourer receiving his daily wages.* How then did the cultivating population live? *They lived upon remissions.* It was thus, by the bounty of the government, which, as it were, gave them back a portion of what it annually abstracted from them, that they were kept alive from harvest to harvest. Had government insisted on making good its claims to their full extent, the collectorate must have broken down under the pressure. The elasticity even of Indian agriculture is demonstrated by the readiness with which the affairs of the collectorate improved, on the just sensible abatement of the pressure.

Is it any wonder that, under these circumstances, land should have little if any saleable value in Guzerat? We hear of transfers being made, but in most of these cases the land is simply abandoned by one party and taken up, subject to the government rent, by another. It is rare that between the parties it has any real saleable value. Were the government to sell its right, even limiting that right to the receipt of no more than a just rent, there would be something to purchase; but as between farmer and farmer, there is at present but little if any thing for one party to *sell* or the other to *buy.* If an occupier makes but the bare wages of a labourer on the average of years, it is clear that he has nothing which another, desirous of occupying, could purchase, unless the latter make up his mind to do with even less of the necessaries of life than the former. Where land is the chief source of subsistence, as in India, a man will take a plot if he has the slightest hope of maintaining himself and family upon it; and many of the transfers which take place in Guzerat result more from a struggle as to who can live on the least amount of subsistence, than from the ambition of realising profits

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over and above a mere livelihood. In England the land is looked upon as the most secure investment for money, and is certainly the favourite one. But who hears of a wealthy native in Guzerat investing his money in land? Between the government tax and the ryot's subsistence, there is nothing left for him to purchase. The class who would be most likely to improve the land, the monied class, is thus kept wholly disconnected from it. Let me not omit to mention that a large proportion of the transfers which are made, for a small consideration, between ryot and ryot, are made in very favourable years, when the temporary high prices of products enable the occupier to show a small surplus profit after paying his rent and maintaining his family. But in ordinary years he can scarcely do this, and, on the average of years, has hardly any thing left to which a purchase value can be attached.

But it may be asked, how comes it, if land is valueless as a *purchase*, that it is held to be good as a *security?* In the first place, it is the best, if not the only security the borrower has to offer; and when taken, it is not so much upon the land as upon his known attachment to the land, that the lender relies. Money is advanced upon mortgage; but it is rare indeed to find a mortgage foreclosed for default. In some instances the borrower has been turned out of possession, and a tenant of the mortgagee put upon the land. But the reception given by the villagers to the intrusive stranger has generally been such as to induce most mortgagees to refrain from such a mode of recovering their money. They hold the bolt suspended over the head of the borrower, well knowing that he will make every possible effort to prevent its being hurled against him. In addition to this, they frequently take personal security in conjunction with that on the land.

Such is a specimen of our dealings with Guzerat, which,

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whilst universally recognised as the garden, is frequently spoken of as the milch cow of Western India. But there is policy in keeping a milch cow in good order. Our course, however, has been to starve and reduce her to the lowest point compatible with existence; rescuing her, every now and then, by driblets of her own milk, from death by inanition.

It may be taken, then, as an indisputable fact, that the rent of Broach, which is the most favourably situated as regards the assessment of all the Guzerat collectorates, *is recoverable only in an average year.* Even then, after he has paid the interest due by him to the money-lender, the cultivator has nothing left him beyond the bare wages of a labourer. But in a year *below the average* he will not have even that much left him, and can only then be saved from suffering and ruin by *remissions.*

The finances of Western India have not hitherto been in the most flourishing condition, the balance-sheet generally exhibiting a very large deficit. Under these circumstances, government has been reluctant to disturb the existing system in a province which has yielded so large a revenue as Guzerat. So far it has, with the exception of the case of Broach, been urged in vain that, as reduced taxation increases consumption and enhances revenue, so the reduction of the rent to a proper standard might redound to the benefit of both landlord and tenant. But when the case of Broach brought the issue to rest between reduction of rent and the bankruptcy of the collectorate, the course taken by the collector in favour of the former was tardily sanctioned. The result has accorded with the expectations of those who viewed the matter in its proper light. All parties have, so far, been gainers; and to complete the triumph of the principle acted upon, all that is wanting is, that it should be still further carried out. In the jumnabundy report for 1849-50, it is stated that the

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increase of cultivation in the pergunna of Unklesur had already, that is, in a single year, together with the absence of remissions, made good 25 per cent of the reduction which had been effected. During the last year a still further increase has taken place. In proof of this let me cite the following extract from the report of the assistant in charge of the pergunnas of Unklesur and Hansote to the collector.

"Notwithstanding the reductions in the revenue consequent upon the introduction of the reduced assessment, the actual collections for the present year in Unklesur and Hansote exceed those of the last year by the large sum of 70,015 rupees." He then proceeds to show that this has not altogether arisen from increased cultivation, the new system having, as yet, not had time to develop itself fully in that direction, but from that source in conjunction with the absence of any necessity for large remissions. He then adds:—

"The effects of the introduction of the reduced rates of assessment are particularly gratifying. The cultivators are bringing every available beega under cultivation; and I have no doubt that in a year or two not only will the sum remitted by the reduced rates be recovered, but the revenue of both districts largely augmented; whilst the increased facilities with which the revenue is paid on the one hand and collected on the other, render the measure still more valuable."

At moderate rates of assessment large portions of the waste lands in the province would be brought into cultivation. In Broach and Kaira about 30 per cent of the land is lying waste, and in Surat the proportion is still greater. In Ahmedabad the cotton cultivation would be nearly doubled, for not fully 60 per cent of its black soil is yet under cultivation.

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But, it may be asked, to what extent should the reduction of the assessment be carried? This is a question which it will be more proper for others than for me to answer; but there can be no hesitation in saying that the assessment should at least be reduced to the level of a fair rent. In England a third of the gross produce is generally supposed to be an ample share for the landlord. Reduced to the English standard, the average rent of Guzerat would be little more than 1 rupee 6 anas, instead of 2 rupees 3 anas as now. But considering the greater fluctuations of seasons in India, this would be virtually fixing it at a higher standard than in England. In view of this, it is conceived by many that one rupee per beega would be an ample rent to exact in Guzerat, so long as its average returns scarcely exceed 4 rupees per beega. Some even contend that it should be reduced to 12 anas, or three-quarters of a rupee. Were a reduction to one rupee per beega gradually and systematically adopted, little, if any, loss would be experienced by the government; for if the reclamation of the inferior lands in Broach, Surat, and Kaira, would not wholly compensate for the loss of revenue in them, that of the superior, but still waste, lands of Ahmedabad, together with the additional revenue which would be received from the increased consumption of dutiable articles in the province, would, in a short time, make good any loss which might at first be sustained. But even should a partial loss be irreparably sustained, it would only be the relinquishment, on the part of government, of a sum now illegitimately extorted from the province.

It is often urged, that even when there is no fixity of tenure or fixed moderate rent, the ryot is protected from exorbitant exactions by the determining of a *maximum* rent, beyond which the collector cannot go of his own accord.

The maximum may be collectable in a very favourable year; but only then by encroaching greatly upon, if not

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absorbing all, the profits legitimately belonging to the cultivator. But in the majority of years, even by absorbing all, it cannot be attained. In such case the business of the collector is, by absorbing all that can possibly be spared, to come *as nearly up* to the maximum as is *practicable.* It follows, then, that where annual settlements with a high fixed rate of assessment still prevail, the people are virtually as much left at the discretion of the collector as they were before his discretion was nominally fettered by a maximum unattainable in the great majority of years.

I have had occasion more than once to advert to the security for the revenue taken by government on the crop. In Kaira, and some districts of Ahmedabad, this is now more a matter of form than in either Broach or Surat, in which the old system is still more or less pursued, which drives the cultivator to the money-lender to advance him money, or become his security on exorbitant conditions, ere he can have the free disposal of his crop. The system is more prevalent in Surat, where a lower moral tone obtains, than in Broach, where frequently the villagers without distinction are, as in Kaira, taken in security for each other. But even this occasions trouble and no little anxiety to the ryots; for although the security when thus taken is said to be merely nominal, it would not turn out to be so in case of default. Each ryot feels that he is thus bound for the punctuality and good behaviour of his neighbour—all that is gained by him being, that by finding similar security he obtains an immediate power of disposal over his own crop.

It may be supposed that, in the calculations heretofore relied upon, I have made no account of the fact, that the land sometimes yields several crops in the course of the year. But I have not overlooked this,—the fact of the land yielding several crops being by no means universally

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true. From lands well irrigated it is possible to get three crops,—a monsoon, a cold-weather, and a hot-weather crop, in the course of one year. But irrigated lands are the rare exception in Guzerat. From unirrigated lands it is possible to get two crops, a monsoon and a cold-weather crop; but this also is rare, for in this case, as well as that of the irrigated lands, what is gained in one way, by taking two or three crops, is lost in another. As may be supposed, the land is exhausted, and the crops are poor in proportion to their number. In Broach and the cotton-growing districts of Ahmedabad it is seldom that more than one crop is taken from the land. The cotton is sown at the beginning of one monsoon, and not finally reaped till within two months of the beginning of the next. Sometimes, as already said, grain is sown with the cotton; but in that case the land will not average between them more than a good single crop of either. The fact, therefore, that several crops may be, and sometimes are, raised in Guzerat, does not affect the calculations in question.

The cost of collecting the revenue was in Broach in 1849-50, 2,97,887 rupees, or between 17 and 18 per cent; in Surat 3,49,371 rupees, or between 18 and 19 per cent; and in Ahmedabad 2,97,466, or about 23 per cent. The charges of collection in Broach are made up as follows:

Allowances to covenanted European officers	55,150	13	8
Hoozoor Cutcherry charges	32,579	14	3
District charges	63,115	15	11
District hereditary officers	27,738	0	8
Village officers, hereditary and stipendiary	80,723	10	3
Village expenses	48,579	2	0
	297,887	8	9

on a gross realisable revenue of 16,07,256 rupees.

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I have thus briefly described the machinery, both European and native, employed in the collection of the revenue,—the manner of its working, and the frauds and oppressions which, under cover of its operation, may be perpetrated against both government and ryots—I have adverted to the different modes of levying the assessment, both in money and in kind—and to the circumstances and prospects of the ryot under the various systems of village management through which the collection of the revenue is effected; and I have entered into an examination of its amount as compared with returns, both as regards the collectorate separately and the province generally. In doing so I have shown that the *government* rent does not always indicate the *full amount* which the ryot has to pay for his lands—that the average *government rental* of the British collectorates is 52 *per cent of the produce*—that the average government rental of Broach is 48 *per cent*—that that of Kaira is about 50 per cent, and that of Surat about 59—and that that of the actually cotton-producing lands of Broach is 43 *per cent.* I have also shown the additional sums paid by the cultivators to the bhagdars and others upon the average assessment; still further, I have shown that the larger rent charged upon the alienated lands brings up the common average of the collectorates to about 57 *per cent;* and that upon the cotton-growing lands of Broach to about 50 *per cent.* And in addition to all this, taking a still wider range, and embracing the *native* as well as the *British* districts, the high rent of the former being maintained by the high standard at which those of the latter remain, I have shown that the average rental of the whole province is about 60 *per cent* of its *gross produce.* I have likewise explained, taking Broach as a sample, how the farmer realises scarcely more than the wages of a labourer in an average year—how the land has no saleable

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value—the evils incident to a system requiring constant remissions—and how, in most years, maximums fixed at scarcely attainable points are but an imperfect protection to the ryots against the ignorance, recklessness, or indiscretion of a collector.

In view of all this, regardless of what has heretofore been said of tenures, is it any matter of surprise that the agriculture of Guzerat should be in so backward a state? Is it any wonder that, under such circumstances, its magnificent soil is ploughed only to the depth of three inches, and that its almost exhaustless resources are but partially taxed? What could we expect of the agriculture of a district which is destitute of a *farming* class, in the proper acceptation of the term? The land, instead of supporting *three* classes, landlords, farmers, and labourers, maintains only *two*—a *landlord*, who appropriates to himself *both rent* and *profits*, and *labourers*, who can scarcely be said to know what a farmer's profits are, the little that may be left them being generally swept away by the middlemen, who intervene between them and the government. They are tenants in the worst possible position—tenants who are, in the first place, deprived of their profits, and who, in the next, have no landlords *except* as the mere *recipients* of rent.

Rent in England is the surplus produce of the land, after the *wages* of *labour* and the *profits* of *stock* have been made good; but rent in Guzerat is the surplus left after the *wages* of *labour* are paid.

How is this state of things to be remedied? Were it for me to consider this question, this is not the occasion on which it should be discussed. One thing would seem indispensable, viz. that a *class* of *landlords should spring up* who would perform towards the soil and the cultivators the *duties* of *landlords*. But how is such a class to be conjured into existence? It never can exist, so long as

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government continues to appropriate to itself so large a share of the produce of the soil. Government must, at least, content itself with a fair rent, to give it the least chance of making its appearance. But it must do more than this: it *must confine its demands to a tax considerably lower than the fair rent*, or the class so much wanted will never be secured. It must, likewise, either convert the bhagdars at once into zemindars, into real instead of sham landlords, into landlords having an interest and a responsibility, or extend the beegotee or ryotwar system, doing away altogether with the sharehold system, which, as already shown, is, as developed in the share-villages, inimical to improvement. If a landlord class is ever to arise, the ryotwar system would seem to be the proper basis for it to spring from. Under that system, no one shares the produce of the soil but the *government* and the *ryot*. Let the government for a time leave the ryot his legitimate profits as a farmer, and he will soon collect a sum which will enable him not only to farm more land than now, but also to accumulate land in his hands, which he can in course of time let out to others. In that case, should government recede from its pretensions to rent, and content itself with a tax inferior to the rent, and at the same time part, for a consideration, with its right as a landlord, a numerous proprietary would, in the course of time, prevail in Guzerat. The process would necessarily be a slow one, but this would appear to be the only mode in which it can be made a sure one. Such a state of things would not only bring *more land* into *cultivation*, but would also bring *more produce* from the land *already cultivated*. It is common to say that Broach produces as much cotton as it can produce. This is true in some sense, but not in another. Broach can add but little to the surface under cotton cultivation; but could, if properly cultivated, which

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it is far from being, add much to the quantity which it produces per acre.

In discussing this whole subject, I might have entered into many more details connected with it which I have purposely avoided, as unnecessary to my main object, which has been to convey a *general impression* of the *entire system*. It is the system in its entirety which constitutes the great evil; and when that is corrected, all the minor evils will disappear.

In conclusion, then, we find the cultivators in Guzerat holding their lands on a tenure which has been already shown to be *insecure*, at rents proved to be *exorbitant*. Either would suffice to cripple the energies of an individual or a community; but when both evils are thus found flourishing in conjunction, it is evident that nothing but the daily recurring necessities of life serve to prevent the utter extinction of both industry and enterprise. Such is the state of things in 1851; although the Committee of 1832 recognised in its report that, "let the system be what it may, the important questions to the cultivator are, the *amount* of his *assessment* and the *proper definition of his rights*." Not only is the assessment exorbitant, but the system under which it is collected is prolific of mischief; and the best that we can now say of Guzerat, after nearly fifty years' possession of some of the fairest portions of it is, that in addition to a faulty system of collection, it is burdened with an assessment so high, that no system of collection, however well devised, could render it easy to be borne.

NOTE.

There are those here who argue that, because a higher rate charged upon the alienated than upon the government lands, the

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latter, so far from being *exorbitantly assessed*, are, in reality, *under-let*. They hold that the higher rates paid for the alienated lands indicate a pressure of population, the competition engendered by which attaches to land a higher value than government avails itself of, and that it is unjust to blame government for the amount of the rates, which is simply attributable to the redundancy of population.

But is there a redundancy of population in Guzerat, and is competition there free? If so, rents are at their natural level, however high they may be. I have already shown that the pressure of population throughout the province is but 218 to the square mile. It is true that 218 to the square mile in Guzerat may occasion as great a competition for land there as 250 to the square mile may do in England, or even somewhat greater, considering how large a proportion of the English population is abstracted from agricultural pursuits. But the difference, in this respect, in the circumstances of the two countries, is not sufficient to account for the enormous discrepancy which exists between their respective rates of rent, the average rental of Guzerat, as compared with returns, being nearly double that of England. It can scarcely, therefore, be said that the rents are, as to their amount, the result of a redundant population freely competing for the soil of the province. How then are the present high rates maintained?

The condition of Guzerat is simply this, that, although its population, taking the province generally, is far from being sufficiently redundant to account for its present high rate of assessment, there is an artificial congestion of population on portions of its surface, to which high rates are arbitrarily superadded in the different localities in which it is found. With a population like that of India, this is not difficult to effect, considering its hereditary immobility, and the disinclination which it evinces to removing from one point to another. But, whilst it should have been the policy of the government to counteract, as much as possible, this tendency to collapse, its practice, if not its policy in Guzerat, has been to strengthen and encourage it, by withholding every inducement

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from the people to scatter themselves over a wider surface. About one-half of British Guzerat is yet unoccupied, the pressure of population being confined to the other half. Of the unoccupied half, distributed in different proportions amongst the different collectorates, the greater part is reclaimable; but will only be reclaimed to any extent on condition of far more favourable terms being granted to such as might be induced to occupy than are now offered. In Broach, Kaira, and Surat, a good deal of the waste consists of inferior land; but so does much of that which is already cultivated. In Ahmedabad, about one-half of which is waste, the greater proportion of that which is so consists of land of a superior description. Why, then, does population not relieve itself by occupying the waste land? Simply because the course pursued with respect to them by the government is virtually the same as if it positively prohibited their occupation. The graduated scale of high rates charged upon the cultivated lands embraces the waste also; so that a man, more adventurous than his neighbour, going and occupying waste land, would pay for it what he had paid for reclaimed land of a similar quality. Is it any wonder, therefore, seeing that he would derive no immediate advantage from occupying a portion of the waste, that he should prefer to continue his occupation of lands already reclaimed on similar terms; and remain in his village, amongst his friends and relations, especially considering how much his immobile nature disposes him to the alternative? He does not look far enough in advance to see that a pretty extensive emigration to the waste would ultimately benefit him, by causing a reduction of the assessment on all lands, waste and cultivated. It is thus that population in Guzerat, with abundance of room for expansion, is cooped up, as it were, within contracted limits, engendering necessities, of which advantage has too long been taken in determining the assessment upon the lands. It is of the redundancy of population, thus artificially maintained, that the proprietors of alienated lands take advantage, in demanding an advance upon the government rates; taking care, however, not to exact sums so

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far in advance of the government rates, as would lead to a preference being given to the waste lands.

Nor does it follow that the rents demanded are at all in proportion to the pressure of population thus arbitrarily maintained. Rents may have an arbitrary as well as a natural adjustment; and nothing tends more completely to subject them to the dominion of arbitrary influences than a monopoly, real or virtual, of the land. Such exists in Guzerat, government monopolising to itself about seventy per cent of the whole surface. Under the circumstances, it can attach to its lands whatever value it pleases, always provided its demands are not pushed beyond the point, to transcend which would be to cause cultivation to cease. The value which it arbitrarily attaches to its lands, both waste and cultivated, becomes the *minimum* value of the alienated lands, or the point of departure for the proprietors in demanding an advance upon the government rates, the only limit to their exactions being the point at which it would be preferable for the ryot to take government waste lands at the government rate. So long as the difference between the two rates is not very great, the ryot is not tempted to throw up the alienated land for which he pays the advance, and desert his village, his friends, and relations : the alienated lands, as before noticed, being chiefly scattered, in detached portions, throughout the government villages.

The case, then, stands thus: there is in Guzerat no redundancy of population, were inducements offered to it to spread itself over the whole cultivable surface of the province. But there is a pressure artificially maintained on certain portions of its surface, which enables government to attach a high arbitrary value to its land, higher even than the necessities of the artificial pressure would give it, were rents permitted to adjust themselves to their proper level; which high value embracing the waste in its graduated scale, acts as a positive barrier to its occupation. The proprietors of the alienated lands, on which the rates are not fixed, and on which the pressure of competition falls, after the government lands, on which the rates are fixed, are occupied,

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take advantage of this to exact an advance of rent, the payment of which by the ryots, who are so situated as virtually to have no alternative, is regarded as a voluntary payment on the part of a population which is redundant throughout the province. Situated as the ryots are, it is in the power of government and the private proprietors to reduce them to the condition of the merest labourer; and how far the cultivators of Guzerat are reduced to that condition, the statements which have already been made will attest. They are remediless so long as they cannot improve their condition by occupying the waste; but once make it worth their while to do so, by granting waste lands on still more favourable terms than reclaimed lands, after the assessment on the latter has been greatly reduced, and the population would be relieved from the necessities which form the basis of present exactions.

Dr. Royle's Work. The Company's Manifesto.

I had written thus far, when Dr. Royle's work was put into my hands. If for no other reason than that some of the most prominent authorities of the India House have contributed to its pages, it may be regarded as the manifesto of the Company in reference to its administration of Indian affairs,—so far, at least, as the cotton interest of the country is concerned. Mr. Prideaux is avowedly the author of the note on the Land Revenue, which appears at the end of the work; a circumstance which lends it peculiar importance, and induces me to direct attention to some of its statements.

It is somewhat singular that Mr. Prideaux, although, when asked, on his examination before the select committee of 1848, If he had ever been in India? he emphatically answered, "Never," —should, nevertheless, be one of the favourite witnesses of those who habitually contend that none but those who have been in India are competent to give evidence as to Indian affairs. How far such parties may be right in holding this opinion, it is needless here to inquire; but certain it is that, had Mr. Prideaux ever visited

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Guzerat, no one would be more sensible than he, how little real application such statements as are made in his note have to that important province. When, for instance, he alludes to the "principle, acknowledged and constantly inculcated by the home authorities, that the assessment should be always kept *within* the *rent*," he cannot surely have intended to include Guzerat as coming within the range of the principle, when he adds that it had been "sedulously followed out by the authorities in India." I have already shown how far above the proper rent the assessment in Guzerat really is, after an occupation of about fifty years of portions of it, and of above thirty years of the remainder.

Mr. Prideaux then proceeds to lay down his canons of fiscal legislation, affirming that, "in respect to the ryots, the objects to be kept constantly in view are, first, that the demand should be *moderate*,—in short, that it should be kept *strictly* within the limits of the rent which they could afford, under average circumstances, to pay." And further, "to secure moderation, the rates should be fixed at an amount considerably below that which a general survey or examination of the lands would serve to point out as the proper assessment." How far this principle has been acted on in Guzerat, the remarks elicited by the first quotation will shew. If Mr. Prideaux had wished to enunciate a principle of which the practice in Guzerat is the grossest caricature, he could not have made a better hit. In securing the "moderation" of which he is the champion, Mr. Prideaux thinks that "no safer guide can probably be found than the ascertainment of what the lands had previously paid for a series of years." If this is to be the standard in any future revision of the assessment in Guzerat, there is but little hope for the province. Unless its rents be adjusted with sole reference to the quality of the soil, and without the slightest reference to the payments of former years, except as warnings against the errors to be avoided, the landed system of Guzerat will continue to be the byword and reproach which it has already been too long to the Indian government. The second canon runs as follows: "It is essential that the demand should not be liable to *increase at the pleasure of the*

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government; that, at the least, before the commencement of the cultivating season, the ryot should know with certainty what he will be called upon to pay for the ensuing year." Now I have hitherto shown that in Guzerat the demand *is liable to increase at the pleasure of the government;* and that neither does the ryot know with certainty what he has to *pay*, nor the government what it has to *receive*, at the commencement of the cultivating season. As already observed, it is improbable that government *will increase* its demand in Guzerat; but of that the ryots do not feel assured, having no guarantee against such a calamity beyond present intentions on the part of those whom they cannot control. The hardship is, that the demand "*is liable* to increase at the pleasure of government;" a fact which, as Mr. Prideaux admits, puts the ryot in a *worse position* than that of a *tenant at will;* for he says that it is only in the absence of such liability, or "with this knowledge," viz. that the rent is not so liable, that "he (the ryot) is in the position of a tenant-farmer in England, holding his lands from year to year." Nor can I have better confirmation of the depressing influence to which I have already alluded, as the result of still leaving the rent thus "liable to increase," than the following passage: "An arrangement of this sort is absolutely necessary, as no man can be expected to exert himself to cultivate his lands to the best advantage, if he feels that any surplus which he may obtain over and above his immediate wants; is liable to be torn from him at the pleasure of the revenue officer." It will not here do, as before shown, to say that the revenue officer in Guzerat has no discretion, inasmuch as he cannot transcend the *maximum* rent which he is commissioned to collect; for if that *maximum* be beyond the ability of the ryot to pay, on the average of years, the collector comes as near the mark with him as he sees fit, thus subjecting the ryot to the discretion of the officer. That such is Mr. Prideaux's own opinion may be inferred from his saying, still further on, that unequal and excessive assessments "lead to the necessity for large annual remissions, which are not strictly dependent on fixed rules (he is speaking of the Bombay presidency), but give *scope to the*

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discretion of the collector, and, it may be feared, to the venality of the inferior revenue officers." The last clause of the sentence confirms all that I have previously advanced regarding the frauds and oppressions attendant upon the *working* of the revenue system in Guzerat. Be it borne in mind too, that these annual remissions virtually operate as *an assessment on the crop:* for when given in cases of failure, the *more valuable* the crop grown on a piece of a land, the *less* the remission,—in other words, the *more* has to be paid; whereas the *less valuable* the crop on a piece of land of similar quality, the *greater* the remission,—in other words, the *less* has to be paid.

In speaking of the saleable quality of lands, Mr. Prideaux adverts to the frequency of their sale in Bengal, but states that "in the ryotwary districts of Madras and Bombay the transfer of lands by public sales is uncommon." Why so? The lands might be exposed to sale; but what is there connected with them to purchase, unless the government part with its own rights, which it is not disposed to do? And whilst land is not an article of bargain and sale in Bombay, it is quite as highly valued by the natives as a possession in Bombay as it is in Bengal. There must be some very great discrepancy, therefore, between the circumstances of these two presidencies to cause that which is apparently so vendible in the one to have no purchase-value in the other.

We are then told that "in the unrevised districts of the Bombay presidency the information relative to the state of the land revenue is less complete and satisfactory." A pretty confession this to make respecting districts, some of which were in our possession long before those which have since been revised fell into our hands. But does any one seriously believe that the authorities at the India House have not long since been in possession of the most ample information respecting Guzerat?

Mr. Prideaux then approaches the oft-mooted question of the effect of the assessment upon the relative value of crops. In approaching it he thus expresses himself: "Assuming, then, that the land assessment of India is generally within, and never, save in rare and exceptional cases, in excess of the natural rent;" an

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opinion which he repeats at the opening of the subsequent paragraph in these words : " In the preceding observations, it has been assumed that the land assessment of India falls within, or at least does not exceed, the fair natural rental of the lands, under the present circumstances of the country." No doubt, many previously so disposed will run away with the idea that this is the case, without waiting to consider how far they may be misled by the vagueness of the language. Whether as regards the rest of India the assumption be well founded or not, it is obviously most gratuitous as regards Guzerat. But it may be said, that Guzerat is intended to fall within the " rare and exceptional cases" alluded to; terms very much calculated to mislead, for they might bring one to suppose that the cases were *insignificant* as well as " rare and exceptional." But Guzerat is of itself a *most important* exception, and should have limited the generality of the language just quoted. Taking the native as well as the British portions of it—for the influence of our assessment is felt over the whole—it has an area nearly as large as that of England, with a soil of unrivalled fertility, and a population of about five millions. The case of Guzerat, therefore, to say nothing of that of Candeish, is one which did not deserve to be pushed jauntily out of view as " rare and exceptional."

After making the assumption in question, Mr. Prideaux observes, that " it remains to be considered whether its amount (that of the assessment) can affect the production of cotton rather than that of any other agricultural product ?" Conceding to him all that he can desire on this point, whenever the assessment is, in reality, within the limits of a fair rent, it does not necessarily follow that his reasoning is of unrestricted application when referred to Guzerat, where the assessment is so far beyond the limits of a fair rent. There the cotton crop is universally recognised where grown as the most valuable, and the rent-paying crop; yet its superior value depends upon circumstances which are more readily affected by the assessment than those on which the value of the grain-crops depends. The latter are valuable for home consumption, as well as from being the source whence

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contiguous markets derive their supplies. The value of the former depends entirely upon its having a foreign, an external market; for there is little raw cotton either spun or woven in Guzerat. A rate of assessment, therefore, which may but little affect the market for grain, may most materially influence the position of Guzerat cotton in the foreign market. Without materially affecting the market for grain, it might banish cotton from the foreign market by putting it utterly out of the ryot's power to compete with his rivals. Thus the assessment, whilst it did not materially influence the production of grain, might cause the cultivation of cotton, which, when cultivated, is more valuable as a crop than grain, to cease either wholly or partially. The effect of the high assessment in Guzerat is materially to restrict the cultivation of cotton; whilst other products, from being more extensively cultivated in its stead, assume an adventitious value in the eyes of those contemplating the matter from a distance. Once fairly reduce the assessment in Guzerat, and whilst all products will be more largely cultivated, the increase in the production of cotton will be greater than in that of any other crop. What is wanted is a steady market in England, which can only be secured by a permanent fall in prices, which will still leave the cultivator a profit. A reduction of the assessment, with other improvements, will effect this; and when it is once effected, the increased production of cotton will exceed the increased production of other articles, inasmuch as the reduction will operate more favourably upon the market for cotton than upon that for the other products of the province. But it is said that Broach cannot put more land under cotton cultivation, however low the assessment may be. Perhaps not; but, as I have previously shown, more cotton could be had, under more favourable circumstances, from the surface already devoted to its culture; while in Ahmedabad about 40 per cent of its fine cotton soil is yet waste.

" The conclusion," says Mr. Prideaux, in drawing his note to a close, " to which these considerations lead, is that the land assessment is, in fact, *no tax*." Here, again, he should have limited himself to those parts of India, and specifically pointed

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them out, where the assessment is within the limits of the fair rent. The remark has evidently no application to Guzerat, where the assessment is both *rent* and *tax*.

There is one passage, however, which has a peculiar application to the province in question, and but too truly, I fear, embodies the spirit in which the assessment in Guzerat was conceived and has been maintained. It is as follows: "When, as in a great portion of British India, the revenue is paid to the officer of government directly by the occupier of the soil, the assessment may amount to the whole rent, *leaving to the cultivator only the means of subsistence, after defraying his farming expenses*, without having any tendency to limit cultivation." I have already shown that in Guzerat, taking Broach as a sample, all that is left, on the average of years, to the farmer is his mere subsistence as a labourer,—in other words, the wages of a labourer. It is no wonder that such is the case, when a great authority of the India House intimates his opinion that this is all that should be left him, when he pays directly to the officer of government, and that all the rest is rent. Nothing is said of the profits of capital; indeed, from Mr. Prideaux's own admissions, farming capital has scarcely an existence in Guzerat. But if such be his ideas of what a fair rent is,—if he thinks that the land, when no one intervenes between the government, as landlord, and the tenant, should support only a landlord and a mere labourer, and that all that is not absolutely necessary to support the labourer should go to the landlord as rent, —it only shows that his assumptions of the assessment in India being within the limits of a fair rent, may be more gratuitous than one might at first suppose them to be; and that it is all the more incumbent upon him to specify where such is the case, so that people can judge for themselves by examining into the real amount of the rent.

But Mr. Prideaux has not done all for those whom he undertakes to defend, by endeavouring to show that they confine their demands within the limits of a fair rent. Supposing this to be conceded to him, it by no means follows that there has been a proper administration of the rental. There is something more

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implied in the term landlord than a mere recipient of rent. Has the East India Company, as landlord in Guzerat, come up to the enlarged and proper meaning of the term? Whilst it has enjoyed all the privileges, has it performed any one of the duties of a landlord? I shall endeavour to answer this question for him under subsequent heads.

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CHAPTER IV.

COST OF CULTIVATION — COMPETITION WITH AMERICA — DIFFICULTY OF OBTAINING INFORMATION — COST OF CULTIVATING SIXTEEN BEEGAS — COST OF INDIAN AND AMERICAN COTTON COMPARED — COST OF INDIAN COTTON IN BOMBAY AND OF INDIAN AND AMERICAN COTTON IN LIVERPOOL — REDUCTION OF COST OF CULTIVATION IN GUZERAT — RESPONSIBILITY OF GOVERNMENT — FUTURE PROSPECTS OF INDIA.

On no other point connected with the inquiry did I find so much difficulty in obtaining correct information as on the *cost of cultivation*. From the ryots themselves I received the most contradictory statements: attributable, in the first place, to the absence of a well-systematised husbandry; and, in the next, to misstatements wilfully made, from a suspicion lest an honest disclosure might lead to increased exactions. The estimates of the European officials were equally contradictory, varying from 10 *rupees* to *one and a half* per beega. Many of them know nothing of the matter, and merely hazard an opinion, their ignorance not necessarily always resulting from indifference, but from their inability to reconcile conflicting statements. Unfortunately they are least likely from their position to get at the truth, a systematic deception in respect to the subject being practised upon them, not without an object, by the ryots. It was not until I had succeeded in assuring the cultivators that I had no connexion whatever with the sirkar (the government), that I succeeded in eliciting from them any thing like the truth.

In the statistical report lately presented on Ahmedabad,

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it is stated, on the authority of a revenue surveyor, that in the Duskroee pergunna the expense, including the assessment, of cultivating *first-class land* is 10 rupees 4 anas per beega, the returns being 12 rupees 2 anas, leaving a balance of 1 rupee 14 anas to the cultivator. On *second-class land* the expense is represented to be 8 rupees 8 anas, and the returns 10 rupees 12 anas, leaving 2 rupees 4 anas to the cultivator; and on *third-class land* the expense 5 rupees, and the return 6 rupees 14 anas, leaving the cultivator a balance of 1 rupee 14 anas. In reference to the correctness of this statement, all that need be said is, that it makes out *bad* land *inadequately* cultivated to be equally profitable to the cultivator as *good* land *well* cultivated. Thus, whilst an outlay of 5 rupees on third-class land will produce him a profit of 1 rupee 14 anas, it requires an expenditure of more than double that amount on first-class land to produce the same profit. It is very evident that there is a gross blunder here in connexion either with outlays or returns, it matters not which, rendering the statement wholly unreliable as regards either. I adduce it as an instance of the extent to which Europeans are frequently misled, when, having little or no knowledge of the subject themselves, they at once adopt the representations of the natives. In the answers received from Ahmedabad to queries lately circulated by the revenue commissioner, I find 6 rupees 6 anas given as the cost per *acre*, including the assessment. The cost per beega is given at 3 rupees 12 anas, rental included. The cost, minus the rent, is 2 rupees 4 anas.

In the statistical report on Broach already alluded to, I find a statement very widely differing from the above. There the expense per beega, including the assessment, of cultivating the light soil, the same as prevails throughout the Duskroee pergunna of Ahmedabad, is set down at 5

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rupees 2 anas, whilst that of cultivating the black soil is stated to be 3 rupees 8 anas 6 pice. When sown with cotton, the cost on the black soil, assessment included, is set down at 3 rupees 11 anas 6 pice, or say 3 rupees 12 anas. Deducting the assessment, we have 1 rupee 12 anas left as the average cost of cultivation. In comparing these two statements, a difference of about an eighth must be allowed in favour of the Ahmedabad beega, on account of its larger size. In the answers from Broach to the queries alluded to above, we have 1 rupee 12 anas positively stated as the cost of cultivating a beega of cotton.

From the mamlutdar of the Broach pergunna I received a detailed statement of the cost of cultivating a beega of black cotton soil, from which it would appear to be 2 rupees 3 anas per beega. On applying to the collector of Kaira, he directed one of the native officials connected with his establishment to prepare me a statement of the ryots' outlays. When this was furnished me, I found the cost of the lowest species of cultivation set down at 5 rupees per beega, the highest, that of sugar-cane, being stated at 93 rupees. On afterwards questioning the official who procured me the information, I found that he knew nothing of the matter himself, but had prepared his statement from the loose conjectures of those whom he had questioned on the subject, many of whom were as enlightened upon it as he was.

From the superintendent of cotton experiments at Surat, I likewise received a statement, which made the expense per beega to be about 2 rupees 2 anas, bearing in mind that the Surat beega, like that of Kaira and Ahmedabad, is an eighth larger than that of Broach.

Finding it extremely difficult to come to any definite conclusion from representations which, differing, as they did, so widely from each other, tended to perplex rather

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than to inform, I determined to examine into the matter thoroughly for myself. With that view I visited a great many villages in the cotton districts, and examined the ryots personally on the subject. My first difficulty was to remove their suspicions that my object was the enhancement of their rent. My next was to get at the real truth; for even after they were assured of my having no connexion with the government, so strong is the habit of prevarication with them, the only resource of a people immemorially oppressed being cunning and deceit, that it was with no little difficulty I could get them to be frank with me. I always questioned a large number of them together, and gave them as little opportunity as possible to consult with one another and concert a reply. Comparing the many statements which I received, the following is the conclusion to which I have come, as the average cost of cultivating cotton-producing land in Guzerat. I may as well mention, that as the statement below gives the cost of cultivating 4 beegas, that was generally the quantity selected by the ryots themselves, by which to estimate their expenditure.

	R.	a.	p.
Cleaning the ground, that is to say, digging up the roots of former crop, &c., for 4 beegas	0	8	0
Two ploughings, at 8 anas each, for 4 beegas . .	1	0	0
Sowing and drilling	0	10	0
Levelling the ground, at the rate of 1 rupee for 12 beegas=for 4 beegas	0	5	4
Seed, and preparing it for sowing	0	2	0
Weeding three times, at the rate of 6 anas each time .	1	2	0
Thinning, at the rate of 6 anas per beega . . .	1	8	0
Picking, 6 pice per dhurree (there being from 3 to 3½ dhurees per beega), for 4 beegas	1	5	0
Total cost of cultivating 4 beegas .	6	8	4

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This divided by 4 gives 1 rupee 10 anas as the cost of cultivation for one beega, Broach measurement.

This accords closely with Mr. Davies's estimate, which, as already shown, takes 1 rupee 12 anas as the ryot's outlay upon the land; as it likewise does with Mr. Blount's estimate for Darwar, where 3 rupees 9 anas are taken as the mere outlay upon an *acre* of land, giving about 1 rupee 12 anas 6 pice as the cost of cultivating a *beega;* and also with a statement respecting the cost of cultivation in Baroda, which I received through the kindness of the resident there, and by which it appears that the cost, including 1 rupee for manure, is only 2½ rupees, or 1 rupee 8 anas exclusive of manure. If, on the other hand, it falls short of the estimate furnished me by the mamlutdar of Broach, it is, from all I could learn, because he makes an overcharge for the processes of thinning and picking.

At a cost, then, of 1 rupee 10 anas per beega, let us see at what rate cotton can be produced per lb. As already seen, it requires, in an average year, 16 Broach beegas to produce a candy of cotton, the government assessment on the lands actually producing cotton in Broach averaging, as before explained, 2 rupees 2 anas per beega.

The average cost upon 16 beegas will therefore be,

	R.	a.	p.
Government assessment, 2 rupees 2 anas per beega .	34	0	0
Other exactions, as heretofore explained, averaging 20 per cent of the government rent	6	12	0
Expenditure upon the land, at the rate of 1 rupee 10 anas per beega	26	0	0
Interest on money borrowed*	3	0	0
Average total cost per candy of 784 lbs. . .	69	12	0

* Both here and in the statement given under the previous heading (in Part III.), I have assumed this item at too low a figure. It would have

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being at the rate of 2⅛*d.* per lb. This, therefore, is the lowest price for which it can be sold, without occasioning a positive loss to the cultivator. At this price he makes no profit. If he sells at the average before given, of 31 rupees per bhar of kuppas, he gets 78 rupees for his produce, leaving him a profit of nearly ⅜ of a penny per lb., making the price of the cotton at the village khullee, in a year of average prices, 2½*d.* per lb. When, however, the demand for Indian cotton is great in England, and prices attain a point which leaves the cultivator something more approximating a decent profit, the price at the khullee will be 2¾*d.* or near 3*d.* per lb.

The selling price of cotton in Broach, leaving the very barest profit to the cultivator, being 2½*d.* per lb., let us see how it compares with the lowest profitable selling price of cotton in America. On some of the richer veins of soil in the States of Mississippi and Alabama, the planter may, owing to the very large returns per acre, in some cases produce cotton with a profit at 5 cents, or nearly 3*d.* per lb. Throughout the States named, the average price leaving a profit will be 6 cents, or 3½*d.* per lb., or even exceeding that. Throughout the seaboard States cotton cannot, on the average, be produced at a profit under 7 cents per lb. Taking 6 cents as the average price, we have 3½*d.* sterling as the lowest average remunerating price to the American planter. In America it is not enough that cotton is produced at a bare profit; for in a country where, as in America, the value of capital is

been nearer the mark had I taken it at 6 rupees instead of 3. The difference per lb. however, which will be but a small fraction of a penny, can easily be borne in mind.

In the statement alluded to in the foregoing note, I have given 66 rupees as the cost of cultivation. But then I dealt only with the average cost upon *government* land, whereas in the present statement I take the average of both *government* and *alienated* land.

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high, and where the people are versatile and free to choose between different modes of turning it to the best account, the cultivation of cotton would be abandoned, unless, taking one year with another, it returned a fair profit upon the capital and labour employed.

But when we speak of 3½*d.* as the lowest average price at which cotton will remunerate the American planter, we must bear in mind that this is the price at the *port of shipment*, not on the *plantation.* The planter in America cleans and presses his own cotton, and afterwards conveys it to market, his market being the port of shipment, where he sells it. The price under consideration, therefore, is that at which he can afford to sell it at the port of shipment, with all the charges of cleaning, pressing, and conveyance to market accumulated upon it. It is obvious then, that, to compare prices, we must bring the Guzerat cotton also to the port of shipment (Bombay), and see what increase on the lowest remunerating price at the village khullee will be made by the consequent charges.

The kuppas being purchased from the ryots, the first process which entails expense is that of cleaning and pressing it. Fortunately, however, this outlay is not added to the first cost of the article; for the seed in Guzerat, by forming excellent fodder for cattle, from its rich oily quality, has a market value which American seed has not, the latter being only convertible to the purpose of manure. It is not only largely consumed at home by cattle, but is also exported in considerable quantities for consumption; as may be inferred from the fact, that the value of the seed exported from the port of Broach alone during the ten years ending 1847-48 was upwards of 90,000*l.* The seed is generally estimated to pay the wakharia not only for cleaning, but also for pressing and local storage; so that these items need not be taken into the account.

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The wakharia, however, must make his profit out of the article, the amount of which will, of course, depend upon the extent to which the *selling* price of the *cotton* is in advance of the *purchase* price of the *kuppas*. The interest on money being nine per cent in India, he is not likely to pursue the business unless he averages the ordinary rate of interest upon his capital. At the rate of nine per cent, then, his profit on 78 rupees' worth of kuppas, that being the average price, would be 7 rupees.

The next item of cost is cartage to the coast, averaging about 4*d*. per ton per mile. Some parts of the cotton-districts of Broach are upwards of thirty miles from the sea, whilst those parts which are nearest the sea are not necessarily nearer a shipping-port than places more in the interior. It is not, therefore, too much to say, that the average distance traversed by the cotton shipped at the different ports is twenty miles. At the rate of 4*d*. per ton per mile, this gives as the average cost of cartage 1 rupee 2 anas per candy.

The next item is freight to Bombay; and, taking into account the charges from all the shipping-ports in the Gulf of Cambay, 3 rupees per candy is rather a low average to adopt. At the opening of the season the freight is low, and continues so, varying a little with the demand and the quantity of tonnage at immediate call, until the month of April, about the middle of which it begins to rise, and gets higher and higher till the close of the season, about the end of May.

The next charge is insurance, generally reckoned at one rupee per candy. I am aware that this is not always effected, some houses in Bombay, largely engaged in the cotton trade, never insuring, or rather choosing to take the risk of insurance into their own hands. But others

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regularly insure; and as it is a fair charge, I add it to the other items of cost.

There is then the native agent's commission, which is usually two per cent, and which, on a candy of cotton at the average price, and with the foregoing charges added to it, will amount to about 1 rupee 12 anas.

At Bombay there are charges of wharfage, carriage, and watching, which will average about 6 anas per candy.

To recapitulate them, the additional charges are:

	R.	a.	p.
Dealer's profit	7	0	0
Transport to port of shipment	1	2	0
Freight to Bombay	3	0	0
Native agent's commission	1	12	0
Minor charges in Bombay	0	6	0
Total additional charges per candy at Bombay	13	4	0

This is without taking into account the cost of storing, both up country and in Bombay, such cotton as has not been shipped either to Bombay or its foreign destination before the commencement of the monsoon; there being no cost for the storage of such cotton as is shipped during the fair season, when, until disposed of, it lies without injury on the green.

But there is still another charge which occurs upon Guzerat cotton before it is quite ready for shipment. To reduce as much as possible the freight on so bulky an article, it is unpacked from the comparatively loose and imperfect coverings into which it is pressed by the up-country screws, and compressed by the powerful screws at Bombay into bales, four of which will go to a ton measurement. The cost of this process, including coverings and lashings, and including also that of getting the

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cotton on board ship, which must in all cases be done through the intervention of lighters, may be taken at about 7 rupees a candy, which will make the total charges between the farm and the port of shipment amount to 20 rupees 4 anas, or close upon ¾*d*. per lb.; which, added to the 2½*d*. already noticed as the selling price on the part of the ryot, gives 3¼*d*. per lb. as the cost of the cotton at the port of shipment, against 3½*d*., the cost of American cotton also at the port of shipment.

It now only remains to consider the freight in each case to England, and the charges there. The latter are common to both, and may be taken at about ¼*d*. per lb., whilst the former is about equal in the two cases; for if the distance is greater in the one case than in the other, the disadvantage is compensated, or nearly so, by the much smaller compass into which the cotton is pressed in Bombay. Freights from Bombay are now 2*l*. 10*s*. per ton, and it is not long since they were 7*l*. Taking 3*l*. as the average, the cost of transport to England is ½*d*. per lb. Allowing the same average for Atlantic freights, we have to add ¾*d*. in either case to the cost of the article at the port of shipment, giving 4¼*d*. as the selling price in Liverpool of American cotton *merely to cover expenses*, and 4*d*. that of Indian cotton; the difference between them being only ¼*d*. per lb., or scarcely 6 per cent of the cost of the American article.

Is it any wonder, in the face of these facts, that Guzerat cotton has no steady footing in the English market? Whilst the difference between the cost prices of the rival articles in Liverpool is but about *six per cent*, the difference between their relative values is generally estimated at *twenty-five per cent*. To enable Guzerat cotton to sell at its cost price, that is, merely to cover expenses, American cotton must be selling at from 18 to 20 per cent

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above its cost price; in other words, realising a profit. When the price of American cotton is beyond this, that of Guzerat cotton rises to a profit-paying point; but when, on the other hand, the price of American cotton is below this, that of Guzerat cotton necessarily falls below the point at which it will cover expenses; and, again, when American cotton sinks to its cost price, the importer of Guzerat cotton is losing from 18 to 20 per cent upon the article. Within the last few years we have seen American cotton range considerably below its cost price in Liverpool, when, of course, the losses on Guzerat cotton were necessarily great.

I am prepared for being met with the assertion, that Indian cotton can be laid down in Liverpool at a cheaper rate than 4*d.* per lb. How far that may be the case with cotton produced in other parts of the country, I am not now prepared to say; nor do I doubt that cotton from Guzerat has been frequently imported at a lower rate than that specified. But that entirely depends upon cotton being parted with on the Bombay green at a sacrifice. If cotton is bought there at 75 rupees per candy, it may be laid down in Liverpool at 3*d.* per lb.; but were such to continue its price for two or three consecutive years, cotton would soon disappear from the Bombay green as an article of export. Guzerat cotton cannot at present be laid down in Liverpool at 3*d.* per lb., without entailing heavy losses upon some or all of those engaged in the trade antecedent to the shipper in Bombay. In such case the losses, which might be at first distributed, would soon be made to accumulate upon the cultivator, who would speedily sink under them, unless government came forward and shared them by granting him remissions. The losses of one year, when cotton sells at 75 rupees per candy, may be made up the next, when its

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price may be from 100 to 120 rupees. But unless, taking one year with another (in view of the outlays to which the cultivator is at present subjected), its average price rose to upwards of 90 rupees, the production of cotton in Guzerat would speedily be annihilated. In the eight years from 1834 to 1841, both inclusive, it only once dipped below 90, viz. in February and March 1840, having been up as high as 185 in August 1836, and at 210 in September 1835. In 1842 it dropped to 90 in May; but throughout July and August ranged as high as 105. Throughout the whole of 1846 its average price was about 80. In 1847 it was about 97. Next year was a year of depression, the price throughout March and part of April having been about 90; from which it rapidly fell in May to 80, and reached 65 by the close of the year. In 1849 it rose to 105. In 1850 for three months it ranged about 145, and in 1851 it fell again to about 105. It will thus be seen that for the last eighteen years prices have, on the whole, been maintained at above 90; but with the terrible depressions of 1846 and 1848 still fresh in their remembrance, the shippers here are not without apprehension that the remunerating price, in view of the present cost of production, cannot, on the average of years, be maintained, and that consequently the cultivation of cotton, and with it the cotton trade, must decline.

To meet so probable an emergency, one obvious resource is, to lower the remunerating point at which cotton can be purchased here for export, by *reducing the cost of production.* Another is to enhance the price of Indian cotton in the Liverpool market by *improving its quality.* Unless something of the kind be done, Indian cotton must continue to struggle with its rival under great disadvantages. American cotton is produced, and forwarded to market, under every advantage which it can ever enjoy.

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Indian cotton must be put upon the same footing; it also must be cultivated *under every possible advantage*, ere it can be expected to engage in successful competition. The struggle will be a more equal one when both articles are thus produced under every possible advantage; and there is all the more reason to get rid of every artificial drawback in its way, seeing that even then, in distance from market, Indian cotton must still continue to labour under an insurmountable natural disadvantage. But the two can never approximate an equality of advantages so long as, in a variety of ways, the cost of producing one of them is subjected to an artificial enhancement from which the other is exempt.

Let us see, then, at what cost, under a more liberal fiscal system, cotton might be produced in Guzerat, so as successfully to compete with American cotton at *all times* and at *all prices.*

There are some, as already noticed, who think that before agriculture in Guzerat can attain its proper footing, the assessment must be lowered to 12 anas, or three-quarters of a rupee per beega. But let us suppose that it is reduced to *a rupee,*—no very extravagant supposition, seeing that a rupee is twenty per cent of the value of the cotton produce, and about twenty-five per cent of the general produce (cotton and grain) of the beega; and also that such a reduction would only be an extension of the principle on which government professes to act in revising the assessment of the Deccan. I have already shewn the other outlays of the cultivator to amount to 1 rupee 10 anas per beega; but under a more improved system of husbandry these outlays might be reduced to 1 rupee 4 anas, or a rupee and a quarter per beega. That this is not too great a reduction to anticipate will be seen from the fact, that Mr. Landon of Broach has cultivated a beega

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at the cost of one rupee. With the landed system of the province on a proper footing—that is to say, with the beegotee system prevailing—a host of middlemen, in the shape of bhagdars, &c. would be got rid of, whose exactions now add materially to the cost of cultivation. Were the means of communication improved, and the country properly opened up, the European would soon take the place of the wakharia, and the native agent be entirely dispensed with. With proper presses, too, established in the country, and Europeans to deal with, in whom confidence could be placed as regards the quality and condition of the cotton, the cost of re-pressing in Bombay might be entirely got rid of. With the cultivation of cotton and the trade in it once on this footing, its cost price to the cultivator and exporter respectively would be as follows:

To the Cultivator.

	R.	a.	p.
Assessment on 16 beegas, at 1 rupee per beega .	16	0	0
Other outlays, at 1 rupee 4 anas per beega .	20	0	0
Interest on money borrowed, say . . .	3	0	0
Total cost to cultivator . .	39	0	0

or close upon 1¼*d.* per lb. Allowing him a profit of 20 per cent upon all his outlays, which is more than in the former case, this would bring the remunerating price to the cultivator up to 1½*d.* per lb., or 48½ rupees, say 50 rupees per candy; in other words, 20 rupees per bhar of kupas.

Supposing the wakharia supplanted by the European, and allowing him 9 per cent, the same rate of profit as the wakharia, his profit would be 4½, or say 5 rupees upon a candy. The native agent would be dispensed with; while there would be a fall in the item of insurance, on account

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of the fall in value of the article insured; together with a fall in the freight from Guzerat to Bombay, owing to the smaller size of the bales from superior pressing. The fall in the two items of freight and insurance would go far towards counterbalancing any small addition which might be made to the freight to Liverpool from the partial swelling of the bales on their way to Bombay.

Taking all these charges, however, the same as before, we should have the cost price at Bombay made up as follows:

	R.	a.	p.
Price of the kuppas	50	0	0
European dealer's profit	5	0	0
Transport to port of shipments, say . .	0	10	0
Freight to Bombay	3	0	0
Insurance	1	0	0
Minor charges at Bombay	0	6	0
Total cost at port of shipment, per candy	60	0	0

or about 1⅞*d.* per lb., say 2*d.* per lb. If to this be added ¾*d.* per lb. as before,—½*d.* for freight to Liverpool, and ¼*d.* for insurance and charges in Liverpool,—we have 2¾*d.* as the cost price of Guzerat cotton in Liverpool, instead of 4*d.* as before.

Comparing this with the cost price of American cotton at Liverpool, we have a difference of 35 per cent in the relative *prices* of the two articles, that of the Indian cotton being a reduction to that extent on the price of American. Between their relative *values*, as before stated, there is generally a difference of 25 per cent, on account of their difference as regards quality. Here, then, we have a gain, on the score of price, of 10 per cent on the difference on the score of quality. Under such circumstances the quality of Indian cotton would be much improved, and that, com-

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bined with moderate prices, would lead to an unprecedented increase of consumption in England; and with so great a difference in price compensating for the difference in quality, American "boweds" and "uplands" might, for most purposes of the manufacturer, find in Indian cotton a very formidable competitor even in the market of Lowell itself.

The apologists of the Company have lately manifested an unusual degree of anxiety to make it appear that the improvement and maintenance of the position of Indian cotton in the English market, is a question not of *price* but of *quality*. But the object of so doing is too transparent for the ruse to deceive any one. If the question were on all hands admitted to be, if not exclusively, at all events very largely, one of price, a variety of points might be broached and discussed in connection with it, which it is considered both more pleasant and more convenient to leave unmooted; whereas, if the public could be brought to regard it as solely one of quality, attention might be diverted to topics which need give the Indian authorities neither trouble nor uneasiness. But the apologists in this overshoot their mark; for, whether the question be one of quality or of price, the Indian authorities cannot escape responsibility in connection with it. It so happens that it is a question of *both quality and price*, the conduct of government materially influencing it in either aspect. As a question of price, government is chiefly responsible for the disadvantages under which Guzerat cotton labours in the English market, and which enables its American competitors to obtain an easy triumph over it. As a question of quality, government is also answerable for much of the inferiority which characterises the product of Guzerat, inasmuch as it could take no steps, as before shown, in the direction of a reduction of cost, without leading to a ma-

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terial improvement in quality. As regards the future prospects of the Indian cotton trade, it is fortunate that the *improvement of the quality* of the article is there not necessarily dependent upon an *enhancement of the cost of producing it.* But, as regards the question of quality, the responsibility of the government is not exclusively of this indirect character. It had direct and obvious duties to perform, which, in Guzerat at least, as I shall presently shew, it has left utterly unfulfilled. Its apologists labour to shew that there can be no improvement in the quality of Indian cotton until it is much more largely produced under European superintendence. Be it so; but such superintendence can never be had, in sufficient quantity favourably to affect the general character of the product, until the country be thoroughly opened up, the task of doing which being one in which government, in a country like India, must necessarily bear the chief share. Thus supposing the question to be one of quality, and one of quality only, it intimately connects itself with government action, which it calls directly under review. But the question being one both of price and quality, we cannot contemplate it from any point of view without finding government mixed up with it, and seriously inculpated. It will not avail the Company, therefore, to endeavour, through its ever-willing apologists, either to hoodwink the public by shifting the ground of controversy, or to influence its verdict by substituting a false for the real issue between them.

The Indian cotton trade has had a hard struggle to maintain in the markets of England; and it argues much for its elasticity and inherent vitality, that, although contending under every disadvantage, it has managed to keep its ground as well as it has done. Who can despair of it, in view of all that yet remains to be done, and is practi-

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cable, for its improvement, seeing that hitherto, despite accumulated drawbacks, it has sustained the competition with partial success? It has had to contend with a rival, superior to it both as regards inherent quality and the condition in which it enters the market, and virtually superior to it in point of price. That rival, being already produced under every advantage, can scarcely be the subject of further improvement as regards either quality, condition, or price; whilst Indian cotton has yet to be improved both in quality and condition, concurrently with a reduction of price, the reduction effected in its price promoting the improvement of its quality. When this is done,—when, like its competitor, it too can enter the market under every possible advantage,—its success, from being partial, will become complete, and the position of India will be vastly improved in her capacity of a consumer as well as a producer.

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CHAPTER V.

IRRIGATION IN GUZERAT — SMALL SUPPLY OF RAIN, AND UNCERTAINTY OF MONSOON — GOVERNMENT HAS RECOGNISED THE DUTY OF IRRIGATING THE PROVINCE — IRRIGATION BY WELLS AND TANKS IN THE SEPARATE COLLECTORATES — RUINOUS CONDITION OF THE TANKS AND WELLS — NEGLECT OF THEM BY GOVERNMENT — GOVERNMENT CIRCULAR — CAUSE OF GOVERNMENT'S OFFERS BEING REFUSED — CANALS PROPOSED BY COLONEL GRANT — THEIR COST.

Is Guzerat a district which stands in need of irrigation?

This is an important point to determine: for if it be not, and efforts have been made to irrigate it, government has been guilty of a misapplication, *pro tanto*, of its resources; whereas if it be, and no efforts have been made to meet its necessities, government stands chargeable with the most culpable indifference to the welfare of a province which has been so long in its possession, and which has contributed so munificently to its exchequer.

Guzerat certainly is not so much in want of moisture as Egypt or Scinde, which respectively depend for their fertility upon the periodical overflows of the Nile and the Indus. Above the Delta, with the exception of the narrow strip of country fertilised by the river, the greater part of Scinde is, from a total absence of rain, one vast irreclaimable desert. Guzerat is not in this plight; for, in common with the greater part of India, it partakes of the benefits of the monsoon. As compared, however, with

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other parts of the western coast, it obtains but a limited supply of rain; for whilst in Bombay the average fall is nearly 80 inches, and in many parts of the Konkan upwards of 150, rising to nearly 300 at some points along the crest of the Ghauts, the average fall during the monsoon in the lower parts of Guzerat does not exceed 30 inches; whilst in the northern and north-western parts of the province, it is in most years considerably below that. And whilst Guzerat thus annually obtains from the heavens an inferior supply of water to that received by the districts lower down the coast, it enjoys the reputation, and certainly not without deserving it, of being, with the exception of the middle and upper parts of Scinde, the hottest portion of Western India. For nearly nine consecutive months it is subjected to the influence of a cloudless inter-tropical sun, the effect of which is aggravated rather than mitigated, as elsewhere, by the local peculiarities of the district. By the middle of March the whole country is parched and shrivelled up: the black soil being baked hard, and intersected in all directions by yawning seams; and the gorat, or light soil, looking as if the dry powder to which it is reduced had just been turned up, and every trace of vegetation buried beneath its surface. The only form of vegetable life which then meets the eye is that of the trees, which, forcing their roots deep into the soil, manage to retain their verdure till the next monsoon; but which, although they overspread the light-soil tracts in magnificent groves, cannot, by the shade which they afford, protect the country from the parching influence of the merciless heat. All around them, and up to their very trunks, the soil is as bare and naked as a newly-ploughed field.

Between this period and the breaking-out of the next monsoon fully three months intervene; during which the

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powers of the soil which are in abeyance could, by the application of moisture, be turned to the production of what are known as hot-weather crops. This is evident from the rapidity with which vegetation answers your summons when you artificially irrigate any portion of the dry pulverised ground; and from the extent to which such crops are produced in some of the northern districts of the province, where water is to be had by digging to but a slight depth for it. But throughout nine-tenths of Guzerat the opportunity is lost from want of water; whilst frequently the cold-weather crops, on which the people depend so greatly for their food, suffer materially before they are reaped, in February and the early part of March, from the depth to which the ground becomes prematurely parched, owing to the scantiness of the previous monsoon.

In addition to its scanty supply of water during even the most favourable seasons, Guzerat experiences another difficulty in the *uncertainty* of the monsoon. It sometimes commences late or terminates early; at other times it does both; whilst occasionally, when it both begins and ends at the regular time, the supply comes in the shape of scanty drizzling rains, instead of in frequent and copious showers. One of the most striking instances of the capriciousness of the monsoon was exhibited in 1848, when also was shewn the universal distress which an unseasonable drought is calculated to produce. In that year, as noticed under a previous head, the rain did not begin to fall until the 17th of July, fully six weeks after its regular time. The distress entailed upon both man and beast was deep and universal; and when the rain at length made its appearance, the tranquillity of the country was on the eve of being disturbed. To the evil of a protracted drought was afterwards added that of an unusually early cessation of the monsoon, the quantity of water which fell during

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the season being scarcely half of the usual supply. The consequence, as might have been expected, was short and in other respects inferior crops throughout the province, from which the ryots were not the only sufferers; for in Broach alone the government that year lost thereby nearly five lacs of rupees, or about 50,000*l.* It is very evident that much, if not all, of this might have been saved to the public exchequer, and much misery and suffering averted from the people, had they possessed the means of making up artificially for the delay in the appearance of their natural supply of moisture, or of making good, after it was over, the deficiencies of a scanty monsoon. It would almost seem superfluous to argue that a district situated like Guzerat would derive advantage from irrigation; and if I here allude to the circumstances connected with its position, which show that it would do so from an abundant artificial supply of water, it is because a disposition is manifested in certain quarters to laugh as much at the idea of *irrigation* as of *roads* in Guzerat. The parties in question not only say that Guzerat does not actually stand in need of irrigation, but that it would be useless, and in some places worse than useless, were the means of effecting it at command; for the hot cloudless sun, they say, would destroy the vegetation which the moisture might force from the ground. To such silly objections, urged on the part of those whose sole object it is to justify a do-nothing policy, the best answer that can be given is furnished by the numerous remains of wells and tanks which every where abound, and which were in full and useful operation at a period not very remotely anterior to the present, when less land was in cultivation than now, and higher rents were demanded from the cultivators. If in such times irrigation was successfully resorted to, to render the lands more productive, and thus enable the ryots to meet

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heavier burdens than they at present bear, it will scarcely now do to doubt its advantages or question its utility. Guzerat, then, being so circumstanced, as if not absolutely to stand in need of irrigation, at least to be capable of deriving great benefit from it, how far has government in this respect acknowledged or acquitted itself of its obligations to the province?

In 1827, about nine years after the greater portion of the province came into our possession, we find the Court of Directors writing as follows on the subject, though not with particular reference to Guzerat: "There can be no question about the expediency of constructing tanks and wells, where there is a satisfactory prospect of their being attended with adequate advantage. There can also be no doubt as to the policy of *disbursements* by government *on that account,* where the whole of the rent, or so great a portion of it is received by government as is received by it in almost every part of India." There could, *à fortiori,* be no doubt, in the Court's estimation, of the policy of such a course where, as in Guzerat, *much more than the rent* was, as it still is, taken from the cultivators by the government. Let us then see how far it has made reparation in this respect to Guzerat, from which it has so long abstracted, not only the whole rent, but much more than can justly be classed under the denomination of rent.

In 1849-50, twenty-two years after the foregoing proposition was enunciated, I find that the quantity of land irrigated in Surat was,—

By wells	7,495	beegas.
By tanks	17,197	„
Total.	24,692	„

out of 756,603 cultivable beegas in occupancy, and 426,799 actually cultivated; being about 3·2 per cent of

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the cultivable land in occupancy, and 5·6 per cent of that actually under cultivation.

In Broach, both tanks and wells are perhaps scarcer than in any other part of Guzerat. To some extent, a reason for this may be found in the geological structure of the collectorate; the absence of extensive beds of sand and gravel, such as abound in parts of Ahmedabad and Kaira, rendering their construction at once more difficult and expensive than in these districts. In Broach, the wells have to be sunk comparatively deep ere water is procured, rendering it necessary to build up their sides with brick and lime in order to preserve them; whereas in the districts of Kaira and Ahmedabad, more favourably situated, water may be had by digging comparatively shallow and inexpensive pits for it. In 1849 there were in Broach, according to Mr. Davies's report, but 1841 wells of all descriptions, 868 of which were exclusively used for drinking and culinary purposes, or about two for each village; leaving 973 for irrigation, of which 474 were out of use. There were thus 499 in use for the purposes of irrigation, or a little more than one to a village; a very inadequate supply indeed, when it is considered that on the average a single well irrigates but eight beegas, or four acres of land. In most cases in which the wells have become disused, their being so has arisen either from their getting into a state of hopeless disrepair, or becoming brackish: for it is a curious fact, that wells which have for years yielded fresh water, have suddenly become impregnated with saline matter; whereas others, which have for years been so impregnated, have as suddenly yielded a supply of fresh water again. No one can traverse Broach without being convinced that irrigation, as an aid to agriculture, has diminished within it; its diminution being in most cases directly traceable to the exorbitancy of the assessment on irrigated lands.

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Mr. Davies further reports the existence in Broach of 1237 tanks, of which, in the year in question, 335 were applied to the purpose of irrigation, the remaining 902 being devoted to the ordinary purposes of the villages, such as the watering of cattle, cleaning of clothes, &c. It is with no little hesitation, considering the authority on which it rests, that I venture to entertain a doubt as to the correctness of this statement; but as the number here given would imply the existence of about three tanks to each village, I must confess that it appears to me to be somewhat exaggerated. I seldom found a village in possession of more than one tank, either in Broach or Baroda. It is true that it was in the month of March that I traversed the collectorate, when many of the smaller and shallower tanks were dry, the beds of which I may have overlooked; for when dry, they are scarcely distinguishable from the fields around them. Taking these into account, and also such as are permanently out of repair and abandoned, the number may considerably exceed one for each village, but I cannot well see that it can amount to three for each. Whatever may be the number in actual use for all purposes, there can be no doubt of the correctness of the proportion assumed by Mr. Davies, as applied to the purposes of irrigation, which is about a fourth of the whole. But though thus applied, they are by no means very extensively so; for otherwise, taking the tanks and wells so applied together, we should expect to find a much larger per-centage of the cultivated area of the collectorate under irrigation than there actually is, the portion irrigated being set down at less than *one per cent.* With very few exceptions, the tanks throughout the collectorate are in the most wretched state of repair, scarcely one in twenty containing water in ordinary seasons throughout the year, the great bulk of them being thoroughly exhausted of

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their supply by the middle or the end of February, and many being dry before the end of January. It is just at the time when, in ordinary seasons, the country is most in need of an artificial supply of water, and when irrigation, either for agricultural or gardening purposes, would be most generally resorted to, that the supply ceases, and the ground cannot be moistened again until the monsoon breaks out in June.

As already noticed, both Kaira and portions of Ahmedabad are very favourably situated for irrigation by wells, the extensive beds of sand and gravel which permeate the two collectorates enabling the ryots in many places to procure water by digging rude pits for it to the depth of but a few feet. In 1823 there were 2423 wells in Kaira, many of which were in a very dilapidated state, and upwards of 100 of which were entirely useless. It is questionable if at this day the number in repair and actually used is greater than it was then. There are in this collectorate no rivers of sufficiently copious supply to admit of their being turned to the purposes of irrigation all the year round; for the waters of the Mhye, which forms its south-eastern boundary, could be much more easily diverted into Baroda and Broach than into Kaira. In some of the villages bordering the Kharee, a tributary of the Sabermuttee, rice crops are irrigated in September and October, the villages making use of their limited supply according to their respective turns, as regulated, to draw water. The Loonee river likewise affords the means of irrigation to some villages, the right of drawing water being regulated amongst them as in the former case. There are villages which also border this river which are excluded from the privilege of using its waters, for want of the prescriptive title on which the others rest. Nothing could serve better than this to show how much artificial irriga-

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tion is needed in portions of Guzerat at least, and how greatly the means of effecting it are prized by those who are furnished with them. About eight years ago a few sluices were constructed on the Kharee river, at the expense of government, for facilitating irrigation, and since then the construction of others has been in contemplation; but how little has really been effected by government for the improvement of the collectorate, in this or in any other respect, may be inferred from the fact, that the amount expended on public works of all kinds throughout it, from 1835-6 to 1849-50, was only 96,416 rupees, or from nine to ten thousand pounds, or between six and seven hundred a year; whilst the sum abstracted under the name of *rent* alone, during the same period, was upwards of *two millions and a quarter sterling*, or above 150,000*l.* a year. And this, too, on the part of a government so ready to acknowledge its obligations in this respect to the country,—obligations avowedly founded upon the magnitude of the sums annually abstracted from it as rent.

Throughout the whole collectorate of Kaira there are abundant traces of the extent to which tank-irrigation was formerly carried. But, as in Broach, the Kaira tanks of the present day are, with rare exceptions, exhausted of their supplies just about the commencement of the hottest and driest season of the year. The only permanent means of irrigation, therefore, which exist throughout the district are wells, which are necessarily imperfect, both from their scanty supply of water and their limited number. They are, generally speaking, of but small capacity, sufficient to enable two leathern bags to work up and down in them. Well-irrigation is at the best but a clumsy, tedious, and imperfect expedient, resorted to only in the absence of better and more effectual means of irrigating the soil. Yet it is to this expedient that the rich and fertile col-

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lectorate of Kaira has chiefly to look for this important adjunct to its agriculture. Of the 691,756 beegas of government land in cultivation in 1849-50, 28,657 are returned as irrigated, being under 2½ per cent. We are not told how many beegas of alienated land were so, the above number being less than 2 per cent of all the cultivated lands in the collectorate. Taking into account the portion of the alienated lands which may be irrigated, it is not likely that the whole irrigated area of Kaira exceeds 2½ per cent of its whole cultivated surface.

I am not in a position to state the exact proportion borne by the irrigated to the dry cultivation of Ahmedabad; but as this collectorate by no means holds a pre-eminent place in respect of improvements, it is more than probable that the area of its irrigation falls, in proportion to the rest of the surface, considerably short of that of Kaira. The Kharee river is a source of artificial supply to a limited number of its villages, as it is to some in the sister collectorate. Some distance below the city of Ahmedabad, the Sabermuttee itself is, but to a very limited extent, turned to the same purpose; the water having generally to be raised from both streams by a rude contrivance, consisting of a rough wooden frame in which a leathern bag is worked. At some points along the line of the Kharee, the land lies low enough to be irrigated by water-courses; but as that stream becomes nearly, if not wholly dry for months before the appearance of the rains, it is but a very imperfect resource to the country on either side of it. In the Duskroee and Dholka pergunnas, there is a good deal of well-irrigation applied to the raising of superior crops, such as sugar-cane. In some parts, wheat, barley, and other grains are raised to a limited extent on lands thus irrigated, when the water, as before said, lies

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but a few feet beneath the surface. As to the state of the wells, the same story of dilapidation and decay is unfortunately as applicable to this as to the other collectorates. Where the water is readily procured, they are of the rudest and most temporary kind; and where, on the other hand, they have been dug deep, and their sides built up, the mason-work, which constitutes their only barrier against extinction, is in most cases rapidly giving way, without any attempt being made to repair it. Ahmedabad, like Kaira, exhibits in many places proofs of the extent to which tank-irrigation was formerly carried. The very sites of many of the old reservoirs are now scarcely distinguishable; whilst such as are still in use, although they may subserve most of the ordinary village purposes, play but an inconspicuous part in the irrigation of the collectorate.

Taking the whole of British Guzerat, it is probable that the *irrigated* cultivation will not be found to exceed 2 per cent of the whole cultivation of the province. What inference is to be drawn from the fact, that such can be said of the province about a quarter of a century after the Court of Directors delivered itself of the magniloquent admission I have already quoted, of its obligations to the country in respect to irrigation? Why has a duty, admitted to be so obviously requisite, been almost wholly neglected in respect to Guzerat? Is it because irrigation would there be attended with no advantage? If so, it is for the apologists of the government to shew that Guzerat would derive no benefit from it. This they have not done, and cannot do.

It so happens that, had government been really very anxious about irrigation in Guzerat, it might, at little cost, have done a great deal towards its promotion and maintenance. Much in this way might have been ef-

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fected, by bringing into, and maintaining in a state of repair the works already constructed for irrigation throughout the province. Tanks and wells, but especially the former, if left to themselves, soon get into a state of disrepair, from which they can only be rescued at considerable cost. The rains which annually supply them deposit in them sufficient sand, mud, and silt, to fill them up in the course of a few years, or at least to render them, in a great measure, useless. The mischief thus effected in a single year could easily be counteracted at little cost, were a system of annual repairs universally and rigidly enforced. There is reason to believe that, throughout the greater part of India, such a system was formerly prevalent, the villagers and private proprietors being liable to be called upon to aid the state when outlays of any magnitude were required, and to do the work themselves when the repairs needed were small, and the outlays insignificant. This system of regularly combining local with state efforts, for the maintenance in full and constant efficiency of works of irrigation, although regularly enforced elsewhere, particularly in the Madras presidency, has been utterly neglected in Guzerat, where government contents itself with a miserable and feeble effort, which ludicrously contrasts both with the object in view and with what might be expected from a vigorous and enlightened administration.

In each collectorate a sum of 6000 rupees is annually intrusted to the collector and his assistants, to be expended in the repair of tanks and wells. On my writing to one of the collectors respecting this fund, I was told in reply, that I was mistaken in treating it as a fund set apart for the purposes of *irrigation*, there being no such fund in existence in the province. It was then explained to me that it was merely a fund for the repair of tanks and wells

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maintained for ordinary village purposes, between which and irrigation, in the proper sense of the term, a very broad line of distinction can certainly be drawn. And even for this purpose the fund is totally inadequate, as government will soon find to its own cost, if it permit the mischief now annually going on much longer to accumulate. Indeed, in many cases, it has now attained a magnitude which renders the interference of the state absolutely necessary to prevent the works from falling into an irretrievable state of decay. In most, if not in all cases, the ryots look for aid. In some, if assisted a little, they themselves could contribute the greater share of the expenditure; but in others, and these not a few, the greater share must, at least in the first instance, devolve upon the state. So far have the public works of this description in Guzerat been permitted to fall to ruin, that to bring them up now to their former state of efficiency would require the expenditure of at least one year's revenue of the whole province.

Take Broach as an instance of the extent to which neglect in this respect can be carried, and of the expense at which alone it can afterwards be remedied. Mr. Davies, after stating, as already observed, that there are 1237 tanks in the collectorate, assumes two square acres as a moderate average for the extent of each. He then supposes that it were thought desirable to put them in a more efficient state, which would render it necessary that half their surface should at least be capable of holding water throughout the year. In that case there would be a surface of 43,560 square feet to each tank to excavate or clean out, to do which to the depth of one foot would cost 435 rupees per tank, at the ordinary rate of one rupee for every hundred cubic feet of excavation; which would be nearly 5½ lacs of rupees, or 55,000*l.* sterling, for this slight repair alone to

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all the tanks in the collectorate. But suppose it were thought advisable, instead of grappling with the whole difficulty at once, to deal with only 10 per cent per annum of it, so that, in the course of 10 years, all the tanks would have undergone repair to this extent, an annual sum of about 54,000 rupees would be found requisite for the completion of each year's instalment of the work, or fully *nine times the amount* now put at the disposal of the collector and his assistants for the repair, not of one-tenth of the tanks, but of all the tanks of the collectorate, with all its wells added. And even could half the fund be contributed in the shape of village labour, government would still have to find about 27,000 rupees a year for 10 years, or 4½ times the sum now annually expended by it as already explained. To excavate some of the tanks, either wholly or partially, to the depth of only a foot, would be scarcely an improvement. To carry the work, in any case, to the depth of two or three feet, would, of course, double or treble the expense. Nor let it be forgotten that the above calculation is based upon the supposition that it is deemed advisable to render *only half* the surface of the tanks capable of holding water throughout the year.

Such, in this respect, are the wants of Broach, and such the means of supplying them; whilst both as to wants and means, it is unhappily but too faithful a type of the other collectorates of the province. At the present rate of expenditure, the number of tanks which annually undergo slight repair is about eight, whilst it is only once in seven or eight years that a single tank is thoroughly repaired. Thus, somewhere about the year 10,000, when, of course, the Company will be still in existence, there is a prospect that all the tanks in Broach will have undergone a thorough repair.

For permitting its professed duties to fall thus heavily

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into arrears, government is all the less excusable, when we consider the ease and trifling cost at which its conduct might have been systematically squared with its professions. Many in England labour under considerable misapprehension as to what a tank in Guzerat is. With the exception of a few in the immediate neighbourhood of the once imperial city of Ahmedabad, whose sides are lined with solid mason-work, which has long resisted the ravages of decay, they are of the simplest and rudest construction; for the great bulk of the tanks of Guzerat are formed by a bank being thrown across the lower end of a small valley, or by taking advantage of a natural depression of the surface, the defects of which are repaired, so as to form it into a basin for the retention of the water supplied it by the rains.

But it may be asked, Why do the cultivators not bestir themselves, with a view to having these works executed? No occupiers of land will improve their holdings, unless, in the first place, they have, or can command, the means of improving them; and in the next, unless their tenure of the land be such as to offer them an inducement to improve. The ryots in Guzerat are not, as regards means, in a position to undertake by themselves extensive improvements, or to contribute very largely towards their execution; nor have they been accustomed to rely exclusively upon themselves for the construction or maintenance of works of irrigation having in view the improvement of whole districts. It is therefore only in cases of extreme necessity that they are found to exert themselves to repair these works. The paltry sum which government now annually devotes to the repair of tanks in each collectorate would have to be trebled at least, to be efficient, if even as much more were exacted for the purpose, either in money or labour, from the ryots. It is thus that, owing

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to the unwillingness of one party, and the inability of the other, nothing has been done, until at length the evil has attained a magnitude which places its removal altogether beyond the reach of private efforts.

But then it may be urged, that wells are comparatively inexpensive, whilst they are confessedly useful; but that, although, as regards expense, they fall within the scope of private effort, the ryots seem as indifferent to them as to tanks, which are now beyond their unaided power either to construct or to maintain. It is quite true that well-irrigation has been by no means carried to the extent to which it might have been, with the greatest advantage to the province; and this, although to the ordinary promptings of self-interest has been added an incentive, on the part of government, to extend it. But is not the fact that, notwithstanding this incentive and these promptings, together with the little cost at which, in some districts at least, wells may be constructed, their construction is nevertheless generally neglected, conclusive proof of there being something inimical to improvement in the landed system of the province? Until 1844, government took as little interest in the extension of well as it yet does in that of tank irrigation. In that year, however, it addressed a circular to its different collectors, embodying a set of rules, the object of which was, *inter alia*, to afford a liberal degree of encouragement to the construction and maintenance of wells. Here they are:

I. Any person constructing a well, to receive a lease exempting him for thirty years from the payment of a higher rate of assessment on the land irrigated from it than is usual on unirrigated land.

II. No advances to be given for the construction of wells to persons who have sufficient capital of their own,

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or the means of procuring it elsewhere; nor to persons who cannot give an assurance that they are able and willing to provide money, labour, or materials towards the work, to the extent of half the amount advanced.

III. In other cases, advances to be made for the construction of wells in the form of tuccavee, at the discretion of the collectors, and on satisfactory security, at a rate, in all ordinary cases, of five per cent per annum, simple interest; and to be repaid in not more than five annual instalments, commencing from the first season in which the irrigated land shall have yielded a return. Special cases, in which *more liberal terms* appear desirable, to be submitted for sanction.

IV. Advances to be made on the same terms as in the last rule, with the exception, that no interest shall be charged for the repair of old works of irrigation, and the improvement of irrigated lands, from which government already derives a higher rent than from unirrigated land. Special cases of this kind, in which it may appear expedient that the cost, or a portion of it, should be borne by the state, to be submitted for sanction.

Had the object of these rules been to defeat their own purpose, they could not have been more adroitly framed to secure it. To the spirit and operation of the first I shall have occasion by and by to refer. The second and third are to be read together, their purport being, that advances in the way of tuccavee, at five per cent interest, for the purpose of constructing wells, be given to such as have not sufficient capital of their own for the purpose, or are not in a position to secure it elsewhere; and also to such as can assure the government that they are themselves able and willing to advance half the amount required. In the first place, the man who applies for an

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advance, unless notoriously a pauper, is to have his circumstances inquired into, to ascertain whether or not he has sufficient capital or credit of his own to meet the proposed expenditure. Such a threatened inquisition into his affairs is of itself sufficient to prevent him, in nine cases out of ten, in which it would otherwise be sought, from seeking an advance where it might be profitably expended. In the next, the man who gets an advance is, as it were, stamped with the government seal as a man of very limited means and credit; a position in which few are willing to place themselves. Again, the man who has credit to procure all the capital that is required, is compelled, if he digs a well at all, to do so at considerable disadvantage, as compared with his neighbour who has only credit to procure half the necessary means; for whilst he has to borrow the whole sum necessary at an exorbitant rate of interest, the other obtains half the requisite means on fair and easy terms. Still again, the man who is so poor that he can only obtain half the credit required can only secure assistance from the government at 5 per cent, on condition of his securing aid to an equal extent from the money-lender, at perhaps 50.

In such, and in other cases, "at the discretion of the collector," that is to say, cases in which no such assurance as that alluded to can be given, advances may be made "on satisfactory security." Why not make this last the sole condition of the advance? Would it not be better, if satisfactory security were given for the repayment of the money, and that the advance would be applied to the irrigation of the land held by the borrower as occupier, to make it at once, without an inquisitorial scrutiny into the applicant's circumstances.

To what extent have these "liberal provisions" been taken advantage of by those to whom they have been

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offered for the last eight years? To all intents and purposes, the rules, with their "liberal provisions," have been a dead letter. Had there been nothing in the provisions of the *others* to interfere with their operation, the terms of the *first* rule would of themselves have sufficed to frustrate their entire object.

By that rule, the cultivator who digs a well is to hold the land irrigated by it for thirty years on the same terms on which unirrigated land of the same quality is generally held. Nothing is more essential to the promotion of improvement than *certainty of tenure*,—certainty, amongst other things, as to the *amount of rent* to be paid annually for the land. Here there is no certainty in this respect, and there can be, therefore, no adequate stimulus. All that the author of the improvement is guaranteed is, that he shall not be called upon, pending his lease, to pay *more* for his *irrigated* than it is usual to pay upon *unirrigated* land; but this constitutes no assurance that what he pays for the first ten years will be what he will be called upon to pay for the second and third ten years of his lease, inasmuch as it affords no guarantee that the charge upon *unirrigated* land will not be altered before the expiry of the lease. If this charge is subject to alteration, it may be increased or it may be diminished; and if increased, the assessment upon the *newly irrigated* land will increase along with it. But it is denied that there is any such uncertainty connected with the matter, by some who hold that the terms on which the irrigated land is to be held for the thirty years are those upon which unirrigated land is held *at the time the lease is made*. But had this been the intention, what could have been easier than to have so stated it in the regulation? Why, if it were intended that the assessment upon the improved land should be subject to no increase for thirty years, state in effect that it should never

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exceed, but should always equal, that upon unimproved land, which is subject to increase at any time? If government would really make its regulations effective for the promotion of irrigation in this way, let it at once guarantee the cultivator, that whilst for thirty years the rent of the land which he irrigates will not be increased beyond the rent paid upon dry or unirrigated land *at the time of the making of the lease,* however much the rent upon unirrigated land may in the meantime be enhanced, he will have the advantage of any and of every diminution which may take place, pending the lease, in the rent of such land. This, after all, would only be *guaranteeing* him that which he is now called upon to take *upon trust.* No ryot would take a lease for a term of years of unirrigated land, without guaranteeing himself against such an increase of rent; far less is he likely first to lay out his money in the improvement of land, and then to take a lease of it, unless he is so guaranteed.

But supposing every thing done which either individual or government can do for the improvement and multiplication of tanks and wells, there would still be large sections of Guzerat which would be but inadequately provided with the means of irrigation. Tanks, however well they may be constructed, or however great their number may be, are of but little avail when a light monsoon furnishes them with a scanty supply. In this way Guzerat is a frequent sufferer from the capriciousness of its climate. A tank which dries up in January is never replenished till late in June; so that, unless irrigation by wells be easy, the hot-weather months are lost to cultivation. But when the monsoon comes late, as it did in 1848, the whole agricultural industry of the country is deranged; and the kurreef or monsoon crops, including *cotton*, are greatly perilled, owing to their being sown very late in the season. Were the tanks always well supplied, the irregularities of the mon-

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soon, which seem to be increasing, owing, it is supposed, to the clearing away of the forests, would be greatly counteracted. If it came late, the ground might in a great measure be prepared by irrigation for the sowing of the crops at the regular time; and if it came in scanty quantity, the supplies artificially at command would go far to compensate for the deficiencies of those coming from natural sources. But how is Guzerat, or any part of it, to be so supplied, so as to provide it with water at the proper season even when the monsoon comes late, and in abundance even when it fails in respect to quantity? It certainly cannot be done until the province ceases to rely so exclusively as now upon the clouds for its annual supplies of moisture. Great portions of Guzerat might be annually fertilised by exacting contributions from the monsoons of other regions. To the whole of that section of it which lies between the Dhadur and the Nerbudda, and between the Nerbudda and the Taptee, including the greater portion of Broach and a large part of Surat, the chief reservoir of supply should be the Vhindya and Sapoora ranges. From these, where it is of little use, a volume of water of scarcely calculable magnitude is annually poured between June and November, by the channel of the Nerbudda, into the sea. No effort whatever is made to convert this, which might become the very life-blood of the country, to agricultural purposes; but it is permitted to flow unheeded through a country which, for two-thirds of the year, suffers from want of water, and whose productive powers are, during the months of March, April, and May, actually in abeyance from the same cause.

Colonel Grant, in his treatise on Bombay cotton and Indian railways, has already drawn attention to this subject, and recommended the construction of two canals: one to commence at a point on the left bank of the Nerbudda

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a little above Broach, and to unite that river with the Taptee at Surat; and another to start from a point on the right bank further up the river, and run towards the Gulf of Cambay in the direction of the Dhadur. Thus, starting not far from each other, but from opposite sides of the river, one would take a south-westerly direction towards Surat, whilst the other would run north-westerly, by the town of Ahmode and the estuary of the Dhadur, to the gulf. Two such canals would form the main trunks for a system of irrigation which would embrace within its operation three-fourths of the Broach collectorate, and the chief cotton-producing district of Surat. The northern canal might be made conducive to the irrigation of the pergunnas of Broach, Wagra, and Ahmode, the best cotton-growing districts of the Broach collectorate; whilst the southern one might be made the means of greatly enhanced productiveness to the pergunnas of Unklesur and Hansote, also in Broach, and largely producing cotton, and to Oolpar and Khorsud, the two chief cotton-growing divisions of Surat. The whole area which might thus be brought under irrigation would comprise *nearly a million of acres, chiefly of cotton-growing soil.*

Whilst at Broach, I ascended the Nerbudda, to inspect the points from which Colonel Grant recommends that the proposed canals should start. The southern bank of the river is generally lower and less precipitous than the northern, which is, indeed, a peculiar feature with nearly all the Guzerat streams to the eastward of the gulf. About ten miles above Broach, you come to the long flat island which contains the celebrated banian tree, known as the kubber burr, opposite the lower end of which both banks drop considerably. This is particularly the case with the southern bank, which suddenly loses its precipitous character, and slopes gently down to the water's edge, the

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river flowing past it by a gentle rapid, over uneven beds of gravel, many of which become small islands at low water. This would seem to be the most eligible starting-point on the southern side of the river for at least forty miles above Broach; for a little way up, the bank suddenly attains its former elevation, which it afterwards preserves for many miles. From this point to Randeer or Surat, the distance in a straight line is not above forty miles; whilst the nature of the country is such, that, in constructing a canal, the straight line need scarcely be deviated from to avoid any physical obstruction.

The spot proposed as the starting-point for the other canal is on the opposite side of the river, some miles further up, between the villages of Junore and Shahpoora, the latter abutting upon the Guicowar's territory, which lies immediately beyond. Here the river, after a very serpentine course, takes a sudden bend to the south, to turn as suddenly to the eastward again some miles farther down, and before it passes Broach. It is from the angle formed by this bend that it is proposed to start the canal, and run it in as direct a line as need be towards the Dhadur.

Colonel Grant's proposition has been objected to on the ground that the surface of the country is elevated too much above the level of the river to admit of its being easily carried into effect. This is particularly urged in respect of the canal proposed to be cut from a point on the northern bank of the river to one either on or in the direction of the Dhadur. I must confess that, between Junore and Shahpoora, at the angle whence it is proposed that the canal should start, and for miles both below and above it, the surface of the country has a considerable elevation, say about thirty feet in the dry season, above the level of the river. This would seem to necessitate the use of machinery to force the water to the level of the country.

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But all, or nearly all this difficulty is founded on the supposition that the water, without forcing, cannot be brought nearer the surface than thirty feet. This could be done by means of a dam thrown across the river, if necessary, at the point in question. Such things have been done in India before, *under native rule*, in regard to rivers which fluctuate in their volume as much as the Nerbudda. But even were it impossible to construct a dam, that does not interfere with the project under consideration, inasmuch as a dam is not necessary to carry it out. During the rains the Nerbudda rises ten, fifteen, and even twenty feet above its hot-weather level, continuing sometimes for weeks at a time at the elevation thus acquired. Were advantage then taken of it, copious supplies could be drawn from it by means of a channel of from fifteen to twenty feet deep in the neighbourhood of the river. Between the two extremes of the proposed canals the fall of the country is perceptible; and as the fall of the surface is more rapid than that which would be necessary for the bed of the canal, the water would, as the canal receded from the Nerbudda on either side, gradually approximate the surface, until at length it attained it, so as to render the irrigation of the fields by simple water-courses practicable. Where the water did not reach the surface, the usual practice of raising it, either from the canal, or its branches, or the reservoirs which it filled, by bullock power, would have to be resorted to. Hundreds of acres might be irrigated by water-courses thus filled, by means of two or three pairs of bullocks; the expense of constructing and maintaining the water-courses falling lightly upon each ryot, as the whole would be shared by many.

About midway between the Nerbudda and Dhadur, the main channel might divide into two branches, one proceeding in a north-westerly direction to the Dhadur, and

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the other returning by a south-westerly course to the Nerbudda again, which it might enter as low down as the town of Meergaum, about fifteen or twenty miles below Broach. And so with the canal running from the Nerbudda to the Taptee, the branch returning to the Nerbudda entering it in the neighbourhood of the town of Hansote, about twelve miles below Broach. By means of subsidiary branches, an immense surface might thus be irrigated; whilst many of the tanks already existing, and other reservoirs to be constructed, might be fully supplied, independently of the monsoon of the district. Neither the canals, their lateral channels, nor the reservoirs dependent upon them, should be filled from the river until the force of the monsoon was spent, when the deficiencies of the natural supply might be made good from the Nerbudda. How frequently this would have to be the case may be inferred from the fact, that it is only in two years out of five that the tanks of Broach are available for even the scanty irrigation to which they are applied. Were irrigation to be carried on more extensively as a system in the collectorate, it is questionable if, in their present state, they would be available to meet its wants for one year out of seven. But by connecting them with the Nerbudda, they would be sure of a full supply every season, a state of things which would meet the necessities of an extensive irrigation. But the great boon conferred would be the obviating of the difficulties of a late monsoon, which now suffice to throw the agriculture of the country so far into arrear as frequently to endanger the crops. The tanks and canals, well supplied at the close of the previous monsoon, would afford sufficient water to irrigate the fields, and permit the kurreef or monsoon crops to be sown about the beginning of June, that is, at the regular season; so that the husbandman would, as regards the commence-

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ment of his operations at least, be in a manner independent of the breaking out of the monsoon. Again, should the kurreef or the cold-weather crops fail from any other cause than want of moisture, the country would be in a position to repair its loss to some extent by a hot-weather crop, which is now scarcely known in either Broach or Surat. The advantage of having such a resource at command is well illustrated by what occurred some years ago in Ahmedabad. On the occasion alluded to scarcely any rain fell during the proper season, the consequences of which were terrible both to man and beast. Whole herds of cattle were driven towards the jungles of Mhyee-Caunta, where a scanty herbage was procurable; but thousands died on the way, their carcases lining the roads. Having thus provided for their cattle, the men returned, and throughout the gravelly tracts vigorously set to digging pits, whence they procured sufficient water to produce a hot-weather crop, which maintained them till the next monsoon. But had the difficulty occurred in Surat or Broach, or in the black-soil districts of Ahmedabad itself, where water would not have been so readily procurable, it is easy to see that the consequences would have been of the most disastrous kind.

What the Nerbudda and the Taptee might be made to do for Broach and Surat, the Mhyee and the Sabermuttee might be made to effect for Kaira and Ahmedabad. From not having so copious a source of supply, the rise of these rivers during the monsoon is not so great as that of the Nerbudda; but if the system of irrigation to which they might be made subservient might not be as perfect as that based upon the supplies of the Nerbudda, it must be remembered, that the districts which it would permeate are better off than either Surat or Broach, in having a supply of water so much nearer the surface than either of these.

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Such is the scheme by which, if carried out, it is proposed to develop the resources of this productive tract of country. It has already got the soil and the sun requisite for fertility, all that it wants to complete its advantages being the distribution over the year of the water-supplies within its reach. The cost of effecting so great an improvement Colonel Grant estimates at 300,000 rupees, or 30,000*l.*, which scarcely amounts to the annual revenue of a single pergunna of the collectorate of Broach. But suppose it cost double this sum, would it not be money well laid out, in view of the greater certainty which it would confer upon agricultural operations, and the enhanced productiveness which it would impart to the soil? It would be but with a bad grace, besides, that government should refrain, on the score of a little expense, from carrying out such an improvement, if feasible, in a district like Guzerat, from which it has long taken so much in the shape of revenue, and for which it has done so little in return. But the expense of the improvement need not be an absolute gift to the province. For the construction of the canals, and the repair of the tanks, government might, in the first place, advance the money, and afterwards reimburse itself by a small cess upon the land, to which the alienated as well as the government lands should be made to contribute. This cess would be cheerfully borne, in view of the benefits to be derived from it, especially if a reduction in the general assessment went hand in hand, as it should do, with the improvement.

There are those who say that extensive works of irrigation would not pay in Guzerat. But did they not pay in former times, when, judging from their remains, they were constructed and maintained on a scale of great magnitude? What has changed in Guzerat to make them profitless now? The soil has not changed, the climate has

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not altered, nothing but the political state of the province has undergone mutation; and it is certainly no compliment to pay to the Company's rule in Guzerat to say, that works which it was at one time found profitable to *construct*, it is not now deemed worth while even to *repair*.

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CHAPTER VI.

ROADS IN GUZERAT — NO PROPER ROADS IN THE PROVINCE — SPECIMENS OF SUCH ROADS AS THERE ARE — RATE OF TRAVELLING ON THEM — NO BRIDGES OVER THE RIVERS — VALUE OF THE EXPORT AND IMPORT TRADE OF THE PROVINCE — TOTAL MADE ROADS — NECESSITY OF HAVING BRIDGES OR FERRIES — EXCUSES FOR GOVERNMENT NEGLECT — TRAMWAY AT DHOLLERA — RAILWAYS — REASONS ASSIGNED FOR THERE BEING NO ROADS — OPINIONS OF THE CHAIRMAN OF THE COURT OF DIRECTORS — TRUE REASONS FOR THE NEGLECT OF PUBLIC WORKS.

It were a misnomer to say that I am now about to draw your attention to the *roads* of Guzerat, for roads, in the civilised and ordinary sense of the term, there are none in the province. The tracts which form its only means of inter-communication are as simple and rude as it is possible for them to be; and whatever progress the country may otherwise have made in material improvement, certain it is that its roads have not yet advanced beyond the first stage of their development. From Bulsar, which is now regarded as the southern limit of Guzerat, to its northern extremity, some thirty miles beyond Ahmedabad, and from the Gulf and Runn of Cutch on the west, to where it abuts upon the territories of Scindia, Holkar, and the Guicowar on the east, comprising an area larger than that of England, its main roads are barely practicable during eight months of the year, and utterly impassable, except to the equestrian, during the other four; its subsidiary lines of communication partaking of the same cha-

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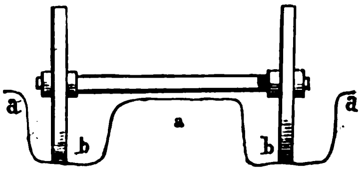
racter, and being, in many cases, scarcely as serviceable or as well defined as a lonely track over the downs.

Where all the lines of inter-communication are so bad, it is difficult to award the palm for pre-eminence in imperfection. The roads divide themselves into two classes, such as permeate the black-soil districts, and such as traverse the light-soil tracts; the two classes generally differing from each other in character, but each being as bad as it is possible for it to be in its own way. As it is utterly impossible to give in words a description of the media of traffic in Guzerat, which can enable any one who has never seen or *felt* them to comprehend the reality, I shall endeavour, by an appeal to the eye, to be a little more successful in this respect. With this view I present the following diagrams, which may enable one to understand at a glance what volumes might otherwise fail to convey. The diagrams are no drafts upon fancy, but sectional representations of actual roads; exhibiting them not in their worst phases, but in the aspects which are characteristic of them. But, before presenting this, it may be as well first to furnish you with the

Abstract idea of a Road in Guzerat. (No. 1.)

(Transverse section.)



SCALE ½ IN: TO A FOOT.

The letters *a, a, a* here represent the surface of the country, and *b, b* parallel ditches worn into the soil by

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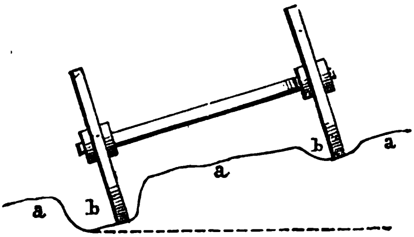
traffic; the diagram being a transverse section of a road in the abstract. The ditches are from a foot to eighteen inches in depth, the only limit to their depth being the extent to which the axletree will permit the wheels to excavate them. Such a road, with the ditches smooth and of equal and uniform depth, would be of a first-rate description, and such as scarcely any district can boast of for twenty consecutive yards together. The following comes nearer the manner in which the abstract idea is realised.

Ordinary section (transverse) of a Road in Güzerat. (No. 2.)



SCALE ¼ IN: TO A FOOT.

This diagram represents the inequality, as regards depth, which characterises the ditches; that to the right being but a few inches below the surface, whilst that to the left is fully a foot and a half. A few yards on, in either direction taken by the road, the same inequality may be presented, but in the opposite direction, the wheel now depressed being then that which is elevated. Each ditch has at bottom a quantity of dust or pulverised earth, which materially increases the draught upon the bullocks. In many cases it happens that one of the ditches is at least a couple of feet in depth, the bottom of which no cart-wheel could reach, were it not that the axletrees have worn away one side of the intermediate

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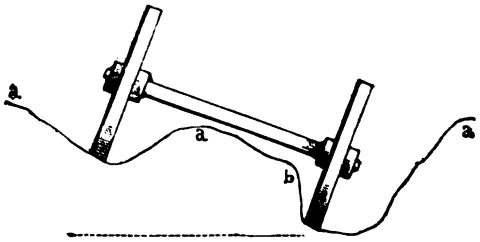
bank of earth. The following diagram presents a transverse section of a road in this predicament.

Section of a Road with one of the ditches deeper than the axletree. (No. 3.)



SCALE ¼ IN: TO A FOOT.

It will be seen from the foregoing how great at *b* is the depression on one side of the bank interposing between the two trenches, caused by its being gradually worn away by the axletrees of the carts which successively pass over it, as the trench to the right increases in depth. At all such points of the road it is necessary for the party or parties in attendance to hang on to the upper side of the vehicle, especially when loaded, to prevent it from upsetting; depressions on one side, like that here represented, being sometimes gradual, but at others sudden and very dangerous. Carts are thus frequently upset, particularly when having any thing like a top-load. Sometimes two deep holes occur together in the ruts or ditches; and as their depth is increased by the wheels plunging suddenly and with great force into them, the earth between them is gradually worn away by the axletree the whole way across. This is represented in the annexed diagram.

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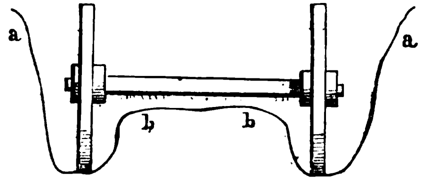
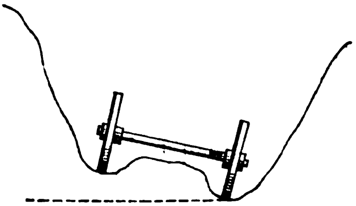
Transverse section of a Road where both ditches are more than half the wheel in depth from the surface. (No. 4.)



SCALE ¼ IN: TO A FOOT.

Here may be seen the commencement of a process which, in districts where the soil is of a tenacious character, and will remain firm at high angles, causes wheels, bullocks, waggon, load, driver, and all at length to sink beneath the surface. In the diagram, *b, b* represents the intermediate earth as being slightly depressed, from being worn away beneath the surface *a, a;* but in process of time, as the ruts deepen, it is more and more rubbed away, until at length the following comes to represent a transverse section of the road.

Section of a Road gradually worn down beneath the surface. (No. 5.)



SCALE ¼ IN: TO A FOOT.

This descent beneath the surface is not the result of an excavation undertaken for the removal of an impediment, but of prolonged and unheeded attrition. It is well when it is no worse than here represented; for when

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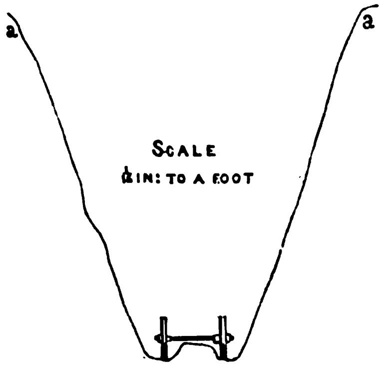
the surface slopes down in any direction, these sunken roads become, during the monsoon, the channel of small streams, the flow of which materially aids in cutting the tracks deeper and deeper every year. A channel of this kind, dry during the hot weather, and occupied only during the monsoon, is designated a *nullah*, the depth of which may be from five to thirty and even forty feet. A road following such a channel would present a section like the following.

Section of a Road through a nullah or water-course. (No. 6.)



Here the depression beneath the surface *a, a* is about thirty feet,—a not uncommon circumstance, especially when the road descends to the channel of a river. The nullah, which in such a case is the bed of a torrent during the monsoon, may in some instances be a mile or more in length, beginning with a depth of a few feet, and gradually descending to the level of the river, upon which it abuts in the form of a deep and narrow gorge. These nullahs are generally so narrow at bottom that only one vehicle can pass at a time, and the consequences to traffic of two or more carts meeting in them may be easily con-

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ceived. Nor is this by any means a rare occurrence. It was my own misfortune more than once to encounter other travellers on these sunken roads. When natives thus meet each other, the loss of time and temper is great. After an hour or two wasted in vehement talk, as to which will have to "back out," they perhaps agree to refer the matter to the patel of the nearest village, which may be three or four miles off. To him they repair; and if he chooses to trouble himself in the matter, the question is decided after the loss of several additional hours. In the meantime, however, the difficulty may have greatly magnified, for other carts may have come up to the impediment in opposite directions. When one of the parties agrees to yield, the next difficulty is how to do so. The bullocks have to be taken out and the carts turned, a most difficult operation sometimes where there is a heavy load; after which the whole train proceeds in the same direction out of the gorge. The yielding party then return, happy if, in passing through, it does not meet with another impediment.*

I have hitherto dealt with the road as if it consisted of but a single track, which it is rare to find it doing in the open country. The space allotted to the roads, particularly in the black-soil districts, where they are hampered by neither hedges nor trees, is generally a wide strip of land comprising *several parallel tracks;* new ones, sometimes six or eight, being cut when the old become difficult or impracticable. Sometimes travellers endeavour to get forward by keeping in the open fields; but even this is practicable during only a very short part of the year.

When a number of parallel tracks happen to be worn

* For a confirmation of the above see the evidence of T. L. Peacock, Esq. before the Committee of the House of Commons in 1853. Fifth Report, page 60.—Ed.

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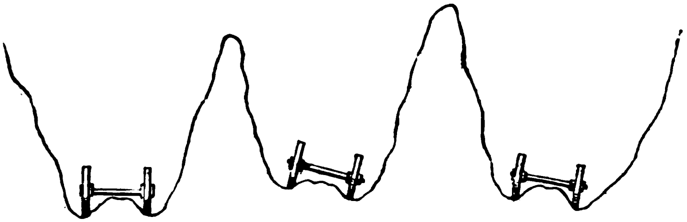
deep together, the road presents a very singular appearance, of which the annexed diagram will afford a sectional illustration.

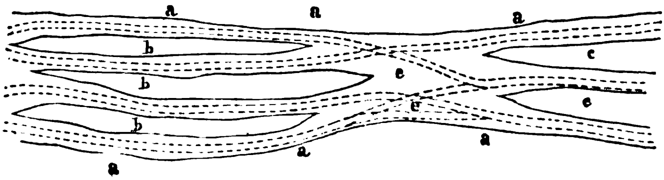
Section of a Road with sunken parallel tracks. (No. 7.)



SCALE $\frac{1}{16}$ IN: TO A FOOT.

Roads in this state are generally to be found where the soil is light, and considerably intermixed with clay, and are perhaps more frequently to be met with in Surat than in any of the other Guzerat collectorates. Each tract is, of course, liable to the same impediments as characterise the nullah roads; and it has happened that three or four of them have been blocked up at the same time, the different parties interrupted being within sound of each other's voices, but hidden by the intervening banks of earth.

Bird's-eye view of a Road, a transverse section of which is given in the above diagram. (No. 8.)



A bird's-eye view of a road, of part of which the foregoing diagram is a transverse section, may be represented by the annexed diagram, in which the lines *a, a, a, a, a, a,*

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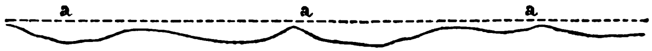
represent the opposite banks, and the irregular figures *b, b, b* and *c, c* the isolated mounds of earth, on either side of which the road proceeds. At *d, d* there are two tracks, which separate into four in passing between the banks and the three mounds *b, b, b,* breaking and intersecting each other confusedly at *e, e,* to branch off again into three tracks in passing between the banks and the mounds *c, c*. The mounds *b, b, b* I have represented as short, whereas *c, c* may be each more than a mile in length. The height both of the banks and the intervening mounds varies, of course, with the depression of the road beneath the surface, being sometimes 3, at others 4, and at others, again, 6, or even 10 or 15 feet. The intervening mounds are, in fact, like so many islands breaking the channel of a stream.

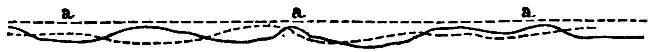
To complete this picture, it is necessary to present you with one or two longitudinal sections, showing the character of the ruts or parallel ditches, of which they so generally consist.

Longitudinal section of one of the parallel ditches. (No. 9.)



Here the dotted line *a a a* represents the surface or top of the rut, and the waving line underneath its inequalities of depth, the greatest depth being from 18 inches to 2 feet. Whilst such are the inequalities of the one rut, those of the opposite one may be as follows:

Longitudinal section showing the inequalities of both ditches. (No. 10.)



In this diagram, as in the former one, the horizontal

dotted line *a a a* represents the surface or the top of both ruts, and the waving line the inequalities of one of them, whilst the waving dotted line represents those of the opposite rut. The motion of a cart along such a track may be more easily conceived than described.

Beyond the Mhye, where the light soil becomes largely intermixed with sand, the parallel ruts are less frequently to be met with; and when they are seen, they are neither so deep nor so well defined as in the other districts. From the Mhye to Ahmedabad, and on to Hursote, the roads generally consist of long strips of loose sand and dust, into which the bullocks frequently sink to the knees, and the wheels almost to the axletree. They are usually enclosed by high hedges, and lined with magnificent trees, and vary very greatly in width, sometimes being upwards of a hundred, and at others not more than six or seven feet wide.

Such are the roads in Guzerat, in describing which, I think I have presented to the eye a series of pictures which no words could paint. The illustrations which I have given are not exceptional instances, improperly selected; they are types of the highways of the whole province, and characterise the lines of road which stretch between the Portuguese frontier of Damaun and the south bank of the Taptee. Crossing the Taptee, about four miles beyond Surat, you come upon the main line of road between that city and Broach; in fact, upon one of the links of the principal thoroughfare of the province. From the Taptee to the Nerbudda, with the exception of a narrow strip of sand between the town of Unklesur and the latter river, is one almost unbroken stretch of black soil, through which the heavy road ploughs its way, with the intermission of scarcely a hundred consecutive yards at any one point, in a manner which renders most, if not all, of the foregoing

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diagrams apposite illustrations of it. The roads entering the very town of Broach are more or less excavated channels, like that represented by diagram No. 5, the houses on either side being perched upon the top of a crumbling bank. From Broach northwards, the road divides into two great branches: the one, the left branch, leading through Jumboosur towards Cambay, at the head of the gulf, with a subsidiary branch leading westward to Tankaria Bunder; and another running north-eastward to Baroda, and the other, the right branch, leading direct through Meahgaum to Baroda. The greater part of these roads run through black soil, and the remainder through tracts of light soil,—of a sufficiently tenacious description, however, to render the roads traversing it as rude, broken, and rugged, as those which permeate the black-soil districts. It would be difficult to find, even in Guzerat, a viler piece of road than that which connects Jumboosur with Tankaria Bunder, the distance between the town and the port being twelve miles. I took upwards of seven hours to traverse it in a bullock-cart, accompanied by Mr. Landon of Broach, and the mamlutdar of Jumboosur; and long before my arrival at the end of it, there was scarcely a bone in my body which was not the seat of pain. On the way, the mamlutdar amused us with several stories of accidents which had occurred on this road, one of which related to the sad fate of a banian (a trader), who received such a jolt as made him inadvertently bite the end of his own tongue off. Had such a catastrophe befallen the chairman of the Court of Directors, or Sir James Hogg, the local government would have been severely censured for having the roads in such a state, and they would have immediately undergone some improvement. But there they still are, as rude and impracticable as it was possible for them to have been a thousand years ago. Nor is this

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road a mere byway, leading to a village or two, but a great thoroughfare, forming the main outlet to a large and rich tract of country. Tankaria Bunder is not only the port of Jumboosur, but also that of Baroda, and, more or less, that of many of the native states of Malwa, in the far interior. For the ten years ending 1847-8, the annual exports from Tankaria Bunder, including those of opium, averaged upwards of 650,000*l.* a year; its imports during the same period did not exceed 52,000*l.* per annum; so that the total trade of the port did not fall far short of three-quarters of a million sterling a year. Yet such is the trade for the transit of which no better accommodation is afforded between the port and Jumboosur than the wretched road alluded to.

From Baroda the road leads across the Mhye, in a northerly direction, through Kaira, to Ahmedabad. To the Mhye, a distance of about ten miles, it is comparatively practicable; but beyond that river, and on to Ahmedabad, it is extremely heavy, owing to the extent to which sand is intermixed with the soil. For part of the way from Ahmedabad to Verumgaum, going westward; and from Ahmedabad to Dholka, south-westward; and on the way to Dundooka, Dollera, and Gogo, it is also extremely heavy from the same cause, becoming rugged, broken, and almost impassable, as in Broach and Surat, as soon as it enters the black-soil tracts on the western side of the Gulf of Cambay.

Upon these, as the main lines of communication, numerous subsidiary roads converge, connecting the remoter districts and villages with the principal thoroughfares. These collateral roads present similar characteristics to those of the main ones, though generally in a somewhat less aggravated form, owing to the smaller amount of traffic upon them.

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The line just sketched is, of course, intersected by numerous streams of all sizes. Few of these, however, are running streams throughout the whole year, the great bulk of them being nullahs, which are dry for at least seven months out of the twelve. But, besides these, there are, between Surat and Ahmedabad, several large tidal rivers, which, in addition to the regular flow of the tides for many miles up their respective channels, are supplied, more or less, with a body of fresh water all the year round. At Surat is the Taptee; at Broach, from thirty to forty miles farther on, the Nerbudda; near Jumboosur, the Dhadur; ten miles or so beyond Jumboosur, in the direction of Cambay, and about forty in that of Baroda, is the Mhye; near Kaira is a small but deep stream, the channel of which is generally full; between Kaira and Ahmedabad is the Kharee; and at Ahmedabad the Subermuttee. But, with the exception of the stream alluded to in the neighbourhood of Kaira, not one of these rivers is bridged. They are all forded in the dry weather, and ferried during the monsoon; except the Nerbudda, the largest of them all, which is ferried at Broach all the year round and at all states of the tide.

The Taptee is forded at Variow, a village a little more than four miles distant from Surat. The river is practicable only at low water; so that for by far the greater part of the twenty-four hours it offers an impassable barrier to traffic. Much time is frequently lost by parties not knowing the precise hour, on any given day, at which the state of the tide leaves the river practicable. It is by no means a rare occurrence to find a whole tide, or about twelve hours, thus lost. Such is a specimen of the difficulties which beset the traveller in making his way along the main highway of Guzerat, and which are repeated at the other fordable streams,—the Dhadur, the Mhye, and

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the Subermuttee. Nor is this all; for the mud and sand collected at the ford, into the former of which the cattle sink several inches, render their passage, particularly with vehicles, almost impracticable.

This being the state of communication in Guzerat, can I be accused of exaggeration in saying, that whatever progress the province might have måde in other directions, its roads had yet scarcely passed the first stage of their development. Nor is this true only of a province obtained by us but yesterday, but of a possession, a portion of which, and that the portion containing the very worst roads, has been in our hands for about half a century. Thus, what most other governments having the least claim to liberality and enlightenment consider the first and most indispensable step towards developing the resources of their country, the Anglo-Indian authorities have, at least as regards Guzerat, practically acknowledged to be of so little consequence, that its accomplishment might be indefinitely postponed.

Whilst the number of people immediately subjected to the inconvenience and risks of such defective modes of transit is about five millions, the extent of the trade of Guzerat, even in its present imperfectly developed state, may be gathered from the following statement of the gross amount of exports and imports for the five years ending 1849-50:

	R.	a.	p.			
1845-6.						
Exports .	1,70,03,708	7	9			
Imports .	1,24,52,189	7	4			
Total .				2,94,55,897	15	1
1846-7.						
Exports .	1,92,49,474	14	2			
Imports .	1,26,40,954	15	4			
Total .				3,18,90,429	13	6

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		R.	a.	p.			
1847-8.							
Exports	.	1,59,33,113	2	4			
Imports	.	1,47,77,671	6	10			
Total	.				3,07,10,684	9	2
1848-9.							
Exports	.	1,84,35,740	0	3			
Imports	.	1,52,12,837	2	4			
Total	.				3,36,48,577	2	7
1849-50.							
Exports	.	2,22,25,399	9	7			
Imports	.	1,69,51,348	12	5			
Total	.				3,90,76,748	6	0

Thus, during the last year of the period, the export and import trade of the province amounted in value to about four crores of rupees, or four millions sterling; whilst for each of the five years of the period its average amount was upwards of three millions and a quarter sterling. How far, under a properly fostering system, this trade is capable of expansion, may be appreciated, when it is considered that that here represented is not the trade simply of the five millions of people who inhabit Guzerat, but also of the many millions peopling the interior immediately beyond the province, and making it their common highway to the sea. How far the impediments just depicted act as a check to the growth of such a trade, I leave you to judge.

That there are difficulties in the way of effecting the requisite improvements in Guzerat is not to be denied. The expense, for instance, of constructing first-class roads, would, no doubt, be considerable; for as nothing, or next to nothing, has as yet been effected, every thing in the way of improving the communications has still to be begun. This, however, is but a fitting retribution for the inex-

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cusable negligence of the last fifty years; for had a reasonable per-centage of the revenue exacted from one portion of the province for that time, and from the remainder of it for upwards of thirty years, been annually expended on works of public improvement, the cost would scarely have been felt, even at the time, whilst the outlays would, by this time, have been more than reimbursed; for Guzerat, opened up in every direction, instead of yielding only 50 lacs of rupees, as now, to government, might, with less pressure upon the individual cultivator than now, have been yielding from 75 to 100 lacs a year.

The little that has been attempted, in the shape of roads for Guzerat, is very easily summed up. There is, in the first place, a macadamised road, about eleven miles in length, connecting Doomus at the mouth of the Taptee, the metal for constructing which was brought all the way from Bulsar. But this road is of no commercial importance whatever, Doomus and Surat being in the correlative positions of a little Brighton to a little London. The European population of Surat (all official) wanted, for their comfort and convenience, an easy access during the hot weather to the sea, and hence the road in question. The upper half of it, too, that next Surat, forms an excellent drive for the residents all the year round; the road being watered, as evening approaches, during the dry weather, so as to protect from the dust such equestrians as make us of it, and those who take more unpretending exercise in a bullock gharree. The road was constructed chiefly by convict labour, the monthly average of prisoners employed having been about 900. The cost was upwards of 70,000 rupees. Leading from the opposite side of the city is a made road to the ford of the Taptee at Variow, a little more than four miles distant. This, however, consists of so rough a causeway, that the natives abandon it

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for the imperfect tracks on either side of it, which are softer to the unshod feet of their bullocks. About seventeen miles further on, on the way to Broach, is a small piece of experimental road, not exceeding three quarters of a mile in length, leading from Keemchokee, the traveller's resting-place, to the bed of the Keem river. The experiment was made to see what could be effected by artistically constructing the road merely of the soil, which was first ploughed, and then thrown up in the centre, with tolerably deep ditches on either side. For some reason or another, however, which I could not discover, it has been left to itself from the time of its construction. At the town of Broach, which has been so long a British station, absolutely nothing whatever has been done for the roads. The town is situated upon an elongated mound, about eighty feet above the level of the river, its suburbs lying back from the river, along the base of the mound. The roads leading from the country to the suburbs are all, not only near, but actually in the town, sunk many feet beneath the surface, the mud-huts of the inhabitants standing on high banks on either side of them: thus, to cross a street, you have to scramble down one earthen bank and up another. The roads, in fact, terminate in small nullahs, similar to what is represented in diagram No. 5, with the exception of the ruts; the tracks being reduced, by constant traffic, to a mass of finely pulverised earth, which, whenever the least breath of air is astir, flies in clouds through the streets and bazaars. The next specimen of a made road with which we meet is at Baroda, fifty miles off, which, as it is entirely confined to the military lines, cannot be of much value to commerce. Fifty miles still further on, we have from two to three miles more of made road within the European bounds of Kaira, along which the residents drive or ride at their pleasure, but of which, *so far from*

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its serving the ordinary purposes of traffic, the natives with their carts, laden or unladen, are denied the use. Twenty miles farther on again, at Ahmedabad, we have four miles of good made road between the European quarter of the city and the camp; but this, like the other roads mentioned, has no commercial significance whatever. To sum up, then, we have,

	Miles.
Road from Surat to Doomus (metalled) . .	10
Rough causeway from Surat to Variow . .	4
Experimental road at Keemchokee . . .	¾
Roads within the cantonment at Baroda, say .	3
Road at Kaira	2½
Road between Ahmedabad and the camp . .	4
Total made road in Guzerat . .	24¼

We have thus, within a province larger than all England,—a province which is drained annually by government of half a million sterling in the shape of land-tax alone, and part of which has paid its full proportion of that half-million for the last half century,—but about 24 miles of made road, an aggregate length scarcely equal to the distance between London and Gravesend. And, as if all the more forcibly to illustrate the great sin of omission in this respect of which government has been guilty towards the province, the whole of this miserable pittance of made road, which so ludicrously contrasts with the crying wants of the country, has, with the exception of the four miles of rough causeway from Surat to Variow, and the three quarters of a mile of road between Keemchokee and the Keem, been constructed either with a military object in view, or for the mere purposes of pleasure.

As for a bridge, with the exception of the wooden one already alluded to as spanning the narrow deep stream near

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Kaira, such a thing is not to be met with along the line of any highway in Guzerat. True, there are two stone bridges over the deep nullah that skirts the camp at Baroda; but had it not been that the nullah skirted the camp, they would not have been there. The history of the two is this: one, a fine bridge of one arch, was built by the resident; but the Guicowar, apprehending that the slender and fairy-like arch was not strong enough to bear him and his elephants, had another constructed of stone beside it, with several small arches instead of one. One of these bridges is clearly useless; and thus it is that, whilst there are two in a place where one was not indispensable, there are numerous places without any where bridges are imperatively required.

The improvement first and most obviously required in Guzerat is, to overcome the serious impediments to traffic offered by its streams. This can only be done by establishing regular and efficient ferries, or by erecting bridges. A regular ferry requires a constant supply of water of sufficient depth for the purpose, which is scarcely possessed in the dry season by any of the Guzerat rivers, except the Nerbudda, at the points where the main roads intersect them. But although the water may at times not be deep enough for a ferry, it may be sufficiently so at all times to impede traffic without a bridge. The channel of the Taptee, where it is crossed by the main northern road, is upwards of a quarter of a mile in width; but for sixteen hours out of the twenty-four, for fully eight months of the year, the water does not occupy more than a third of the space. With such daily variations in the quantity of water, it would be necessary, in order to establish a ferry which would be available at all times, that two long piers, floating or fixed, should stretch out over the broad belts of mud, which, for the greater part of the day, intervene

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between the banks and the water. To do this would be nearly as expensive as to entirely bridge the river on a somewhat similar plan. But the moment the bridging of the Guzerat rivers is suggested, a thousand difficulties are started by the habitual panegyrists of the government. The first, greatest, and most readily relied upon, is the monsoon; a kind of stereotyped objection in the mouths of those whose business it is to apologise for every remissness on the part of government. That the monsoon presents a difficulty is not to be doubted, as floods may prove very destructive to such works as bridges; but the Guzerat floods are not so great as in other parts of India, where bridges have not only been undertaken, but successfully established. Lower down the coast, but particularly to the south of Bombay, the fall of rain along the crest of the Ghauts averages from 100 to 175 inches during the season. A large proportion of this fall is rapidly shed in cataracts upon the Konkan, down the successive slopes of which it pours impetuously into the sea. At some points of the Ghauts the fall is much greater, as at Mahableshwur, where it averages nearly 300 inches in four months. This year, not far from Kolapoor, no less than 120 inches of rain fell on the hills during the month of July alone. Let it not be said then, that, if it has been found practicable to bridge streams so situated, there is an insuperable obstacle in the way of bridging the Guzerat rivers. In the first place, the quantity of rain which falls in Guzerat is not *one-fourth* that which falls in the Konkan or in the Deccan, in the immediate neighbourhood of the hills. It does not exceed *one-sixth* of that which falls at many points, and is scarcely more than *a tenth* of the fall at Mahableshwur. In the next place, from the level nature of the country, the flow of the water is much less impetuous than it is near the Ghauts. I am aware that the larger

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streams, such as the Nerbudda and the Taptee, rise to a great height during the rains, interposing an obstacle certainly to bridging them, but not an insuperable one, as is proved by what has been effected elsewhere. The Mhye and the Sabermuttee also rise during the rains, but not to the same height as either the Nerbudda or the Taptee. But even supposing the case hopeless as regards the larger rivers of Guzerat, it surely cannot be said, if impetuous torrents have been spanned elsewhere, that a Guzerat nullah cannot be bridged. Yet no more has been done in Guzerat to bridge the nullah, or ordinary ravine, than has been attempted with a view to spanning the Taptee.

It might be expensive, but would be quite practicable, to bridge the Nerbudda. The Taptee, the Mhye, the Sabermuttee, and the Keem might be spanned, the first three by a bridge of boats, and the latter by a suspension-bridge; while the Dhadur and other rivers might be crossed by stone or wooden bridges.

If the government apologists are ready with objections when the feasibility of bridging the Guzerat rivers is suggested, they are no less so when the practicability of improving the roads of the province is hinted at. In this case the objection most generally relied upon and most confidently put forward is, that in Guzerat there are *no materials* for making good roads. But supposing the argument to be true in the main, it cannot be universally so of a province so large, and with so diversified a surface, as Guzerat. So far from government having availed itself of its opportunities where materials were abundant, it happens that the paltry attempts which it has made in the way of road-making in Guzerat have been precisely in those districts where the materials were least to be found.

But *is* Guzerat destitute of stone? It would be curious, after all, to find an argument so unsound in principle

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destitute of a foundation in fact. The southern boundary of the collectorate is *rocky*, owing to a spur of the Rajpeepla hills shooting forth, with but little elevation, into the plain. This rocky belt intervenes between the collectorates of Broach and Surat, lying midway between the Nerbudda and the Taptee. In other parts of the province also stone is abundant, and situated so as to be quite available for the wants of the country.

Much has been said of the expense of road-making in Guzerat; but this has been much exaggerated. If material be more costly than in a rocky and less fertile country, the flatness of the province will diminish the cost, and counterbalance the expense attending the carriage of stone and other material. But even were such expenses more considerable than I have supposed, the richness of its soil makes an outlay on its means of communication desirable and economical, which in a poor province would be imprudent and extravagant.

But supposing all the excuses so readily resorted to to have some foundation in fact, and that Guzerat had no materials for making good roads; that the construction of good roads in it would, therefore, be ruinously expensive; and that, when constructed, they would be liable to be destroyed by the first monsoon,—do they singly or collectively amount to a good reason why the roads in Guzerat have been so long left in their *present imperfect state?* Are there no gradations of improvement which they might have undergone, between the rude track which constitutes the first germ of a road, and the perfection of a road which is to be found in a macadamised highway? The supineness of the government has permitted every trifling obstacle to be considered a sufficient excuse for doing nothing, and would even now seem to render it incapable of action were metal rained from the skies.

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It is fortunate, however, that a metal road is not indispensable as the first step towards developing a proper system of roads for this province. The soil of the country would suffice as material for a decided improvement. What is indispensable to Guzerat at present is, not a system of *perfect roads*, but one of *accessible, practicable highways*, over which much greater weight could be carried in much less time, with more safety and less cost, than now. For such roads, the soil, if properly dealt with, is amply adapted. In illustration of this I may refer to the short experimental road already alluded to as stretching between Keemchokee and the Keem river. This road, which is thirty-six feet wide, with a ditch five feet wide at top on either side of it, and which was originally constructed at an unnecessary cost, having been since left to its fate, traffic and a succession of monsoons have done their worst upon it; but it still remains, a striking commentary upon the highways at either end of it.

I freely admit that roads thus simply constructed would be annually rendered impassable for heavy traffic by the rains, and that they would have to be put in a state of repair each year at the cessation of the monsoon; but that should not be regarded as a valid objection to commencing the work of improvement, by simple, fair-weather, and practicable roads. Where are the roads to be found so complete and durable as not to require repair? The most perfect highways require annual supervision; the macadamised roads need it; and there is no line of railway which does not require the constant labour of gangs of men to keep it in working order.

Private enterprise has already done something for the improvement of the communications of Guzerat. I refer to the short tramway uniting Dhollera with its bunder.

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For this first specimen of a railway both Guzerat and Western India are indebted to the enterprise of Captain Fulljames, who was for many years in command of the irregular horse at Ahmedabad. Having infused a little of his own energy and spirit into one or two Europeans and a few native capitalists connected with the northern districts of the province, he got a sufficient sum subscribed to undertake this work.

It may be asked, Is Guzerat capable of sustaining a railway? If so, it is obvious its course should be through the very heart of the cotton-growing districts. This might be done either by running the line direct from Baroda, by Meahgaum, to Broach; or by making it diverge towards Broach, to the eastward of Jumboosur, with a short branch from the latter place to the main line. Such a course is indicated by the red line connecting these points on the map, showing both the main and branch lines between them. The difference in mileage between them would be but very little. By so directing it, the whole line would be made available; for whilst its upper half would be within reach of the rich grain-growing districts in the vicinity of Baroda, its lower half would command much of the cotton-traffic of the Broach collectorate. Such a line would not be expensive; but if it were to rely simply on the traffic of the district through which it would pass, it would certainly, for some time at least, not do more than pay.

A railway, however, to pay in that section of Guzerat, must be the terminating link of a great chain, embracing vast populous and wealthy districts in the interior. From want of proper communications with the shores of the Gulf of Cambay, a large proportion of the trade of Malwa is now thrown, through Candeish, upon Bombay. The average length of the additional land-journey which it

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has thus to encounter, between the different commercial centres of Malwa and Bombay, is estimated at about 200 miles greater than the distance of these points from the coast of the gulf. That the whole trade of Malwa would be poured upon the Gulf of Cambay, were facilities of communication provided between them, is evident from the fact, that a great deal of that trade already finds its outlets by the gulf ports. A good railway from Indore or Mhow to Baroda, and thence to the coast, would direct the whole upon Guzerat. Such a railway might ultimately be continued on to Agra, which would make the Guzerat ports the most available outlet for the trade of an enormous section of the north-west provinces. At present, the trade and passenger traffic of these provinces are almost exclusively directed upon Calcutta, not because it is their best outlet for Europe, but because hitherto the facilities of communication with Calcutta have been infinitely greater than with Bombay. But with greater, or even equal, facilities for reaching Bombay, the traffic of an immense interior region, now feeding Calcutta, would be directed upon that port. The route from Agra to Bombay by Guzerat is not the shortest mathematical line that could be drawn, but it is the most practicable that could be found. In the first place, it is the shortest line by which to reach the coast; whereas the difficulties in constructing a road by that route would be light as compared to those which must be encountered in attempting to construct one through Candeish direct to the presidency. In the latter case, there would be two separate ranges of mountains, the Sarpoora and Chindya ranges, to overcome, together with several rivers to cross, including the Nerbudda and Taptee; in addition to which, it would be necessary to descend a formidable ghaut before getting to Bombay. But by the Guzerat route, both the ghaut and the

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hills would be avoided; whilst, instead of having to cross rivers, the course of the railway almost the whole way to Indore would be nearly parallel to the streams which would intersect the route by Candeish. By the Guzerat route, the last 160 or 200 miles of the journey would have to be performed by sea; but this would be compensated for by the much shorter, to say nothing of the much more practicable land journey. In addition to the line from Indore, and eventually from Agra, a branch line might be constructed from Ahmedabad, which, passing through Kaira and Neriad, might join the main line at Baroda. The Mhye would have to be crossed in constructing this branch; but the difficulty presented by it would be by no means too formidable to be overcome. The country between Ahmedabad and Baroda is, without exception, one of the richest districts of Guzerat, and beyond all question the most populous; and there is not an argument which can be used in favour of any portion of the Baroda and coast line, as regards the traffic of the country which it would traverse, which would not be applicable to the entire branch line, crossing the collectorate of Kaira to Ahmedabad.

Here comes the question, Which is the proper line by which to unite Baroda with the coast? The more successful the proposed railway, and the greater the traffic to which it might give rise, the more necessary would it be to have as its outlet a good and serviceable port. For this purpose the best course would be to cross the Nerbudda, and continue the railway to the Taptee, which it might be made to strike between Randeer and Surat. This would certainly be to prolong the railway some thirty miles farther; but the prolongation would be in the direct line to Bombay, whilst the country traversed would be one unbroken cotton-growing region, the present outlet to

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the produce of the greater part of which is either of these two places. But the great advantage of thus prolonging the line would be the gaining of a comparatively good harbour; the Taptee, though an inferior, being a far more practicable and useful stream than the Nerbudda.

The proprietors of this line would rely upon the wealth, resources, and traffic of the districts which it traverses. In this respect the double line converging upon Baroda, and terminating at Surat, would not seem to be without ample grounds for anticipating success. The line between Ahmedabad and Surat alone would unite four cities, the aggregate population of which must be considerably upwards of 300,000. The whole district which it would traverse too, whilst about the most fertile in India, is very populous, there being upwards of 400 people to the square mile in the Kaira collectorate, and about 300 in that of Broach. The line from Agra to Baroda would intersect regions both populous and wealthy until it passed Indore, shortly after which, between that and Baroda, it would enter upon a comparatively lonely region, once the seat of population and wealth, but portions of which have been alternately desolated by war, pestilence, and famine. This region it would tend rapidly to re-people, and would thus speedily re-develop its now dormant resources. With such immense regions of such vast and varied capabilities to drain of their traffic, after having called them into new life and activity, who can doubt that such a railway, economically executed and judiciously managed, would answer all the reasonable expectations of its projectors?

The map which I append will exhibit the course which a great part of the proposed line would pursue.

Having thus reviewed the present state of the roads in Guzerat, I shall briefly allude to some of the reasons why it is urged, Guzerat does not require good roads.

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The first reason assigned for its not needing them is, that most of the productive districts of Guzerat are within easy reach of the sea; few, if any, of its cotton-growing districts particularly, being more than from thirty to forty miles from the coast. This, if true, which it is not of large districts in the neighbourhood and to the westward of Ahmedabad, can form no reason why the communications with the coast should not be as perfect as circumstances will admit. There is no part of Scotland which is forty miles distant from salt water; and if the argument were of any force, Scotland ought to have no made roads at all. Again, Manchester is not more than thirty miles from the sea, and yet it finds it both necessary and convenient to be united with the coast by the best possible means of communication. But whilst, east of the gulf, few of the cotton-growing districts are much more than forty miles from the sea, there are districts producing in abundance other articles than cotton much farther from it; whilst north and north-west of the gulf there are extensive grain and cotton growing districts, which are from 75 to 100 miles removed from the sea. Besides, it is forgotten, that whilst good roads would increase the communication of already productive districts with the coast, they would call into productiveness districts in the interior at considerable distances from the coast, which are now partially or wholly unproductive. It is a wretchedly narrow view, too, to take of the matter, to regard the question of roads in Guzerat as one in which that province alone is interested. It should not be overlooked that, if Guzerat is itself contiguous to the sea, it intervenes between the sea and regions much more extensive than itself in the interior. The question of intersecting Guzerat with good roads, then, is one in which the vast regions around it have an interest only secondary to its own.

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But the most extraordinary reasons given are those which were offered, a short time ago, to the Court of Proprietors, by the honourable chairman of the Court of Directors, in resisting Colonel Dickenson's motion for the improvement of the means of communication in Guzerat. He based his opposition to the motion on two grounds, the first of which was, that he had lately seen a letter from one of the Guzerat collectors, in which it was stated, *that, except during the three months of the monsoon, there was no difficulty in getting from Guzerat to Bombay.* The motion was for the improvement of the roads *between the interior and the coast;* and the objection, that a good communication already existed *between one point of the coast and another.* What would be thought if, on a motion being submitted to the Chamber of Commerce in favour of constructing a *good road from Manchester to Liverpool,* the president should object on the ground that there was already a *good communication by sea between Liverpool and Dublin?* Yet this would be but the counterpart of the honourable chairman's reasoning. In stating his next reason for objecting, the chairman managed to get upon the real ground of dispute. He had been told by an American gentleman that the Guzerat roads were *admirable,* and that a very little outlay would make them *excellent!* He would soon be of a very different opinion, if he had daily to traverse three or four miles of such roads in getting from his residence to Leadenhall Street. If the roads are admirable, the diagrams I have furnished are no illustrations of them; if the diagrams are illustrative of the true state of the roads, to apply the term admirable to them is a palpable abuse of language. The chairman then informed the proprietors that the necessary expenditure had been ordered by the Court of Directors. But with such notions respecting the roads in India, what are we to ex-

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pect but that the expenditure ordered will be ludicrously incommensurate with the work to be performed?

Such being the alleged, what are the real reasons why Guzerat has been so systematically and disgracefully neglected? Guzerat owes her treatment partly to her resources, and partly to her geographical position. Her resources have enabled her, without costly outlays, to contribute in far greater proportion than any other district in the presidency to the government exchequer; and so long as she continued to pay well, why go to any expense about her? But her neglect is perhaps mainly attributable to her position. She lies between the seat of government and no place of fashionable resort either for gaiety or health. This is her true misfortune. Had Poona and Mahableshwur been to the north of her, or had she been turned round so as to have intervened between Bombay and the Deccan, she would long ere this have been intersected with the best of roads, notwithstanding her want of materials, the cost of procuring them elsewhere, the monsoon, her neighbourhood to the sea, or the apathy of her inhabitants. It is its position which has made the Deccan, in this respect, such a contrast to Guzerat. In March, the governor and staff, the commander-in-chief and his staff, and a whole army of officials, abandon Bombay for the cool retreat of Mahableshwur, up amongst the hills, 4000 feet above the level of the sea, to get at which the Konkan has been crossed by good roads, although it is quite as near the sea as Guzerat is; ghaut upon ghaut has been climbed, and other obstacles overcome utterly unknown to Guzerat. About the end of May, the approaching rains, which fall at Mahableshwur to the extent of nearly 300 inches in three months, occasion another migration to Poona, where the peripatetic government, with all its accessories, remains until the end of September, when it again

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scales the mountains, by means of very good roads, to Mahableshwur, to spend there the hot month of October. Early in November the official absentees descend again upon Bombay, where gubernatorial and other duties are resumed and continued till the succeeding March, when the annual migration again commences. Such is the eccentric orbit in which the government of the presidency moves, in traversing which, no matter how rugged, inhospitable, and unproductive may be the districts which it crosses, it always finds itself accompanied by good practicable roads, whilst the broad and fertile plains of Guzerat are left without a highway on which, at any point, you can scarcely for a hundred yards at a time safely gallop your horse.

It is not Guzerat alone that complains of being sacrificed to Poona and Mahableshwur. In 1847, the collector of Dharwar, complaining of the state of the roads in his collectorate, observes, that if the money had been expended in their improvement which had been laid out in improving and adorning the station at Poona, the greatest benefits would have accrued to the trading and other interests of the country.

Aside of the obvious interest which every government has in improving the country under its rule, the government of India owes to Guzerat a heavy debt in the shape of improvement of its roads, and a reform in its fiscal system. It owes it this debt in consideration of having lately been put in a disadvantageous position in regard to the districts in the south, with which it is called upon to compete. All the reforms which have recently taken place in financial matters, and all the disbursements which have been made on public works, have been confined to the favourite Deccan. Thus, whilst tenures in Guzerat are still as uncertain as ever, some degree of fixity has been

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given them in the Deccan; whilst the assessment is still high in Guzerat, it has been greatly reduced in the Deccan; and whilst the means of communication in Guzerat are still in the state in which they have been from time immemorial, roads have been made in many directions in the Deccan; in fact, whilst they have been proposed, sanctioned, and executed in the Deccan, they have not even been proposed in Guzerat. The consequence is, that Guzerat is no longer in the same condition to compete with the Deccan that she was in before; and she now comes in with a plea for simple justice and fair play, which no other government on earth could withstand.

Were there nothing else to put the government of India on its defence at the bar of public opinion, its supreme neglect, for so many years, of the material interests of Guzerat would suffice to do so; a neglect which I have endeavoured faithfully and truly to expose, and of which no government directly amenable to any thing like a public opinion could be guilty, or of which, if guilty, it could for a moment extenuate.

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CHAPTER VII.

HARBOURS OF GUZERAT — SEA-COAST AND PORTS — TOTAL VALUE OF COTTON EXPORTED—TOTAL VALUE OF EXPORT AND IMPORT TRADE— SURAT — RANDEER — BROACH — TANKARIA BUNDER — CAMBAY— DHOLLERA (KHOON AND BOWLEAREE)—CAPTAIN FULLJAMES'S TRAMWAY—ITS PROPOSED EXTENSION—CONCLUSION.

GUZERAT possesses a more extensive line of sea-coast than perhaps any of the other maritime provinces of India. From the frontier of the petty Portuguese territory of Damaun, it stretches round the Gulf of Cambay and the peninsula of Kattiawar to the Runn of Cutch, presenting, on the whole, an irregular coast-line of upwards of 500 miles in length. Along most of this extensive line of sea-board facilities are afforded, more or less, for the coasting trade of the country, as conducted in native craft. From the Runn of Cutch, down the southern side of the gulf, and along the southern coast of the peninsula, there are numerous small harbours; the bulk of which, however, can only afford a precarious shelter to the smaller country craft, only a few of them being accessible, and that only at particular states of the tide, to pattimars of the larger class. But by far the greater part of the trade of the province converges upon the Gulf of Cambay from the west, the north, and the east; indeed, with the exception of that of the southern and western portions of Kattiawar, the gulf is the great outlet to the whole trade of Guzerat.

From Bombay to the mouth of the Taptee the coast is intersected by numerous small inlets, or nullahs, the

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most commodious of which are turned to shipping purposes. From the Taptee to the northern extremity of the gulf there is a succession of broad and capacious estuaries—those of the Taptee, the Nerbudda, the Dhadur, the Mhye, and the Sabermuttee—which afford accommodation to the coasting craft.

The principal ports of Guzerat are confined to the gulf. They are Surat, Broach, and Tankaria Bunder on its eastern side; Cambay at its head; and Khoon, Bowlearee, Bhownuggur, and Gogo on its western side. In addition to these there are several minor ports, noticed in the Custom House returns.

The first of the principal ports deserving attention is Surat, not only from its position, but from the conspicuous part which it played in our early transactions with India. This latter consideration contributes much to its present importance, its prominence among the Guzerat ports being now more traditional than real. From Surat, which was once the emporium of the trade of Western India, where the flags of many nations were formerly displayed from factories, the very sites of which are now disputed, and the former wealth and extent of which are now attested only by its ruins, the contribution to the aggregate export and import trade of the province for 1849-50, which, as already seen, amounted in value to 3,907,674*l.*, was only 708,467*l.*, being but 18 per cent, or less than a fifth of the whole. The relative value of the trade of Surat to that of the other ports of Guzerat, as well as of the different ports one with another, will be seen at a glance from the following tables furnished me on the spot; the one exhibiting the value in rupees of the cotton exports of the different ports for the five years ending 1849-50, and the other the value of the total export and import trade of each during the same period.

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Statement of the value of the Cotton exported from the Ports of Guzerat during five years, from 1845-46 to 1849-50.

Ports.	1845-46.			1846-47.			1847-48.			1848-49.			1849-50.		
	R.	a.	p.	R.	a.	p.	R.	a.	p.	R.	a.	p.	R.	a.	p.
Bugwara	...			...			...			...			...		
Bulsar	...			295	0	0	...			2,381	0	0	748	0	0
Gundevee	1,497	0	0	2,752	0	0	2,642	0	0	1,803	0	0	...		
Nowsaree	1,272	0	0	...			...			...			...		
Surat	1,11,433	0	0	5,020	0	0	7,46,347	0	0	9,98,348	0	0	11,94,302	0	0
Bhugwa	2,950	0	0	...			...			...			...		
Broach	16,56,544	0	0	19,51,188	0	0	16,53,176	0	0	20,14,814	0	0	23,55,428	15	5
Dehj	2,959	0	0	6,031	0	0	506	0	0	1,085	0	0	2,338	0	0
Tankaria	1,21,093	0	0	2,102	4	10	7,14,590	0	0	6,01,231	0	0	6,97,336	0	0
Dehgaum	...			...			...			1,279	15	0	...		
Bowlearee	11,64,540	0	0	23,44,419	10	0	13,92,100	0	0	7,05,121	0	0	11,13,882	0	0
Amlee	3,394	0	0	...			...			...			...		
Khoon	5,93,644	0	0	14,64,368	0	0	23,67,490	0	0	40,67,453	0	0	50,43,372	0	0
Gogo	84,680	0	0	4,14,080	0	0	3,95,584	0	0	4,02,036	0	0	4,83,876	0	0
Bhownuggur	1,11,902	0	0	5,40,498	0	0	5,03,287	0	0	6,47,955	0	0	5,88,360	0	0
Cambay	...			...			...			...			...		
	38,55,908	0	0	67,30,753	14	10	77,75,722	0	0	94,43,506	15	0	1,14,79,642	15	5
Cotton exported under securities from Surat, &c.	12,22,835	8	0	16,53,737	6	0	...			...			...		
	50,78,743	8	0	83,84,491	4	10	77,75,722	0	0	94,43,506	15	0	1,14,79,642	15	5

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Statement of the value of the Import and Export Trade of the Ports of Guzerat during five years, from 1845-46 *to* 1849-50.

Ports.	1845-46.								
	Imports.			Exports.			Total.		
	R.	a.	p.	R.	a.	p.	R.	a.	p.
Bugwara . . .	45,465	3	10	99,768	8	5	1,45,233	12	3
Bulsar	74,869	0	0	3,75,001	0	0	4,49,870	0	0
Gundevee . . .	71,097	0	0	4,79,353	0	0	5,50,450	0	0
Nowsaree . . .	56,640	2	0	45,014	13	0	1,01,654	15	0
Surat	22,33,584	15	0	20,49,929	2	4	42,83,514	1	4
Bhugwa . . .	6,229	0	0	20,225	0	0	26,454	0	0
Broach	19,50,693	0	0	24,55,690	0	0	44,06,383	0	0
Dehj	6,088	0	0	62,975	0	0	69,063	0	0
Tankaria . . .	2,90,819	0	0	3,08,256	0	0	5,99,075	0	0
Dehgaum . . .	. . .			. . .			. . .		
Bowlearee . . .	34,42,161	0	0	19,40,707	0	0	53,82,868	0	0
Amlee	2,33,083	0	0	12,882	0	0	2,45,965	0	0
Khoon	5,28,812	0	0	8,11,405	0	0	13,40,217	0	0
Gogo	30,24,391	0	0	5,57,299	0	0	35,81,690	0	0
Bhownuggur . .	1,34,890	0	0	1,81,239	0	0	3,16,129	0	0
Cambay . . .	3,53,367	2	6	3,11,139	8	0	6,64,506	10	6
Dhollera . . .	. . .			. . .			. . .		
Total . .	1,24,52,189	7	4	97,10,883	15	9	2,21,63,073	7	1
Opium exported from Gogo and Tankaria . .	. . .			50,97,100	0	0	50,97,100	0	0
Shawls exported from Gogo . .	. . .			9,72,889	0	0	9,72,889	0	0
Cotton exported under security from Surat, Broach, Tankaria, &c.	. . .			12,22,835	8	0	12,22,835	8	0
Total . .	1,24,52,189	7	4	1,70,03,708	7	9	2,94,55,897	15	1

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TABLE (*continued*).

Ports.	1846-47.								
	Imports.			Exports.			Total.		
	R.	a.	p.	R.	a.	p.	R.	a.	p.
Bugwara . . .	41,283	14	5	91,714	4	10	1,32,998	3	3
Bulsar	82,085	0	0	3,49,913	0	0	4,31,998	0	0
Gundevee . . .	70,501	0	0	4,63,445	0	0	5,33,946	0	0
Nowsaree . . .	33,699	10	0	51,295	3	2	84,994	13	2
Surat	27,46,250	9	1	24,12,750	11	6	51,59,001	4	7
Bhugwa . . .	9,880	0	0	17,638	0	0	27,518	0	0
Broach	15,60,404	0	0	26,10,255	0	0	41,70,659	0	0
Dehj	6,302	0	0	48,667	0	0	54,969	0	0
Tankaria . . .	3,53,348	3	10	2,39,499	3	11	5,92,847	7	9
Dehgaum . . .	23,248	12	0	14,236	6	3	37,485	2	3
Bowlearee . . .	20,93,273	0	0	26,72,443	0	0	47,65,716	0	0
Amlee	...			...			...		
Khoon	19,70,051	0	0	16,98,389	0	0	36,68,440	0	0
Gogo	31,32,223	0	0	9,11,770	0	0	40,43,993	0	0
Bhownuggur . .	1,38,780	0	0	6,35,811	0	0	7,74,591	0	0
Cambay . . .	3,79,624	14	0	2,62,450	12	0	6,42,075	10	0
Dhollera . . .	...			...			...		
Total . .	1,26,40,954	15	4	1,24,80,277	9	8	2,51,21,232	9	0
Opium exported from Gogo and Tankaria . .	...			37,84,965	10	0	37,84,965	10	0
Shawls exported from Gogo . .	...			13,30,494	4	6	13,30,494	4	6
Cotton exported under security from Surat, Broach, Tankaria, &c.	...			16,53,737	6	0	16,53,737	6	0
Total . .	1,26,40,954	15	4	1,92,49,474	14	2	3,18,90,429	13	6

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TABLE (*continued*).

Ports.	1847-48.								
	Imports.			Exports.			Total.		
	R.	a.	p.	R.	a.	p.	R.	a.	p.
Bugwara . . .	25,114	7	8	70,328	0	0	95,442	7	8
Bulsar	1,11,485	0	0	4,16,972	0	0	5,28,457	0	0
Gundevee . . .	37,496	0	0	5,29,413	0	0	5,66,909	0	0
Nowsaree . . .	23,304	0	3	32,234	12	0	55,538	12	3
Surat	28,60,194	8	2	27,16,898	7	1	55,77,092	15	3
Bhugwa. . . .	5,973	0	0	11,921	0	0	17,894	0	0
Broach	17,19,880	0	0	23,00,253	0	0	40,20,133	0	0
Dehj	3,755	0	0	38,913	0	0	42,668	0	0
Tankaria . . .	3,83,881	11	0	20,89,993	12	1	24,73,875	7	1
Dehgaum . . .	31,741	3	9	13,175	11	2	44,916	14	11
Bowleearee . . .	15,98,546	0	0	15,61,434	0	0	31,59,980	0	0
Amlee	...			...			...		
Khoon	34,36,493	0	0	28,51,817	0	0	62,88,310	0	0
Gogo	40,14,789	0	0	24,61,903	0	0	64,76,692	0	0
Bhownuggur . .	1,45,250	0	0	5,44,462	0	0	6,89,712	0	0
Cambay . . .	3,79,768	8	0	2,93,281	0	0	6,73,049	8	0
Dhollera . . .	...			13	8	0	13	8	0
Total . .	1,47,77,671	6	10	1,59,33,013	2	4	3,07,10,684	9	2

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TABLE (*continued*).

PORTS.	1848-49.								
	Imports.			Exports.			Total.		
	R.	a.	p.	R.	a.	p.	R.	a.	p.
Bugwara . . .	40,504	2	0	1,14,460	12	0	1,54,964	14	0
Bulsar	1,49,848	0	0	8,07,178	0	0	9,57,026	0	0
Gundevee . . .	4,190	0	0	1,82,171	0	0	1,86,361	0	0
Nowsaree . . .	16,023	3	0	4,383	8	0	20,406	11	0
Surat	25,37,778	15	1	34,72,294	12	11	60,10,073	12	0
Bhugwa . . .	4,603	2	11	8,368	11	10	12,971	14	9
Broach	15,79,575	0	0	24,91,756	0	0	40,71,331	0	0
Dehj	3,838	0	0	25,264	0	0	29,102	0	0
Tankaria . . .	4,83,596	12	4	33,87,906	15	6	38,71,503	11	10
Dehgaum . . .	36,686	5	0	65,903	4	0	1,02,589	9	0
Bowlearee . . .	8,66,075	0	0	7,69,939	0	0	16,36,014	0	0
Amlee	...			...			...		
Khoon	40,44,183	0	0	45,50,718	0	0	85,94,901	0	0
Gogo	49,39,807	0	0	16,39,788	0	0	65,79,595	0	0
Bhownuggur . .	78,713	0	0	6,57,383	0	0	7,36,096	0	0
Cambay . . .	4,27,415	10	0	2,58,225	0	0	6,85,640	10	0
Dhollera . . .	...			...			...		
Total . .	1,52,12,837	2	4	1,84,35,740	0	3	3,36,48,577	2	7

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TABLE (*continued*).

Ports.	1849-50.								
	Imports.			Exports.			Total.		
	R.	a.	p.	R.	a.	p.	R.	a.	p.
Bugwara . . .	38,679	4	0	1,24,482	4	0	1,63,161	8	0
Bulsar	2,17,363	0	0	8,56,999	0	0	10,74,362	0	0
Gundevee . . .	7,054	0	0	1,14,456	0	0	1,21,510	0	0
Nowsaree . . .	10,854	0	6	10,515	7	0	21,369	7	6
Surat	31,27,913	3	2	39,56,764	10	10	70,84,677	14	0
Bhugwa. . . .	5,942	15	9	19,755	1	9	25,698	1	6
Broach	22,68,589	0	0	29,75,026	0	0	52,43,615	0	0
Dehj	8,144	0	0	97,552	0	0	1,05,696	0	0
Tankaria . . .	3,56,294	4	0	41,85,770	12	0	45,42,065	0	0
Dehgaum . . .	61,003	0	0	2,07,577	10	0	2,68,580	10	0
Bowlearee . . .	6,56,612	0	0	11,66,133	0	0	18,22,745	0	0
Amlee	...			...			...		
Khoon	44,50,514	0	0	55,51,307	0	0	1,00,01,821	0	0
Gogo	50,87,379	0	0	20,64,821	0	0	71,52,200	0	0
Bhownuggur . .	1,06,576	0	0	6,01,396	0	0	7,07,972	0	0
Cambay. . . .	4,48,431	1	0	2,92,843	12	0	7,41,274	13	0
Dhollera . . .	...			...			...		
Total . .	1,68,51,348	12	5	2,22,25,399	9	7	3,90,76,748	6	0

From the foregoing tables it will be seen, that whilst Surat contributes in a minor degree, as compared with several of the other ports, to the cotton exports of the province, it has also latterly been behind two, viz. Khoon and Gogo, in the total amount of its exports and imports. This is a great change for a place which was formerly the entrepôt for the whole trade of the province and of the

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districts immediately behind it, and to which, in a commercial sense, the other ports with which it is now called upon to compete were tributary. It is now, like them, one of the tributary ports to Bombay, more than four-fifths of the whole trade, which used to converge upon it, now passing it on its way to the modern capital of Western India. So long as Surat was the point on which our whole trade with Western India ultimately converged, it mattered but little to her what ports the trade of Guzerat *first sought* as its outlets to its market. But now that, in common with the other ports, she has herself become merely tributary to the trade of Bombay, it becomes of the utmost importance to her to divert to the Taptee as much as possible of the trade between Guzerat and the capital. Possessed, both as regards its improvability and the approaches to it, of unquestionably the best port on the gulf, she would, by the improvement of her harbour, and by being put in direct and easy communication with the different districts of the interior, secure to herself much of the transit trade which now seeks Bombay through other channels. A road from Candeish, for instance, would direct through Lower Guzerat much of the trade both of that important province and of Berar, which now finds its way to Bombay by a long, difficult, and expensive land-journey. A great northern highway from Surat, *via* Broach, Baroda, Neriad, and Kaira to Ahmedabad, and branching from Baroda towards Malwa, would make Surat the chief outlet to a large proportion of the trade of Malwa, and to much of that of Ahmedabad and the districts immediately dependent upon it, the trade of which is now almost exclusively confined to the western ports of the gulf. In this way, too, both Malwa and Ahmedabad would be brought into direct contact with a port having a constant steam-communication with Bombay, in-

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stead of being, as now, confined to ports which a steamer rarely visits, and never except when specially hired for the purpose.

But no improvement of the means of communication between Surat and the interior will be of much avail, unless both its harbour and the approaches to it are also improved. The city is situated on the south bank of the Taptee, from twelve to fourteen miles above its mouth. The Taptee is, in a commercial point of view, the most useful of all the Guzerat rivers; for although inferior in point of magnitude to the Nerbudda, it offers greater facilities for trade and for communication with Bombay. As already noticed, steamers of considerable tonnage ascend it to Surat at certain states of the tide; and with no very great outlay, it may be made practicable to them, as far as the city, during the greater part of the day. The greatest obstruction is perhaps the bar at its mouth; but now, when that is passed, steamers and other craft ascending the river are often stopped at particular points between the bar and the city from want of water. It often happens that the steamers cannot ascend beyond a village called Mugdulla, five miles below Surat, where passengers and goods are landed in the mud.

To avoid in future the disasters from floods, to which Surat has been so frequently subjected, a small artificial channel was cut some years ago, commencing at a point a few miles above the city, to carry off some of the superfluous waters of the monsoon. But this, whilst it may have saved the city to some extent from periodical inundations, has, from the diminished force of the current, permitted a larger accumulation of deposits in the bed of the river. In the apprehension of many, the river is thus gradually filling up and becoming less navigable every year. But this artificial channel is unnecessary; for in

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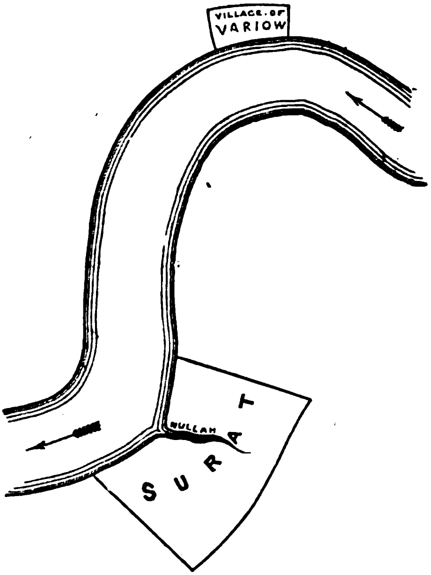
the opinion of first-rate engineers, well acquainted with the place, the city might be saved from the dread of inundation, without any injury to the navigable qualities of its river. It would appear that Surat owes its disasters in this respect, to some extent at least, to the peculiarity of its position. It is situated at the bight of a rapid bend in the river, as the following diagram will show.



At Variow, on the high road to Broach, the river bends suddenly to the southward, pursuing that course to Surat, where it bends as suddenly again to the eastward. Surat, as will be seen, is situated upon the outer sweep of the bend taken by the river to the eastward, the bank on which it is built being much higher than the opposite one, which is comparatively low, and frequently inundated during the monsoon. The whole force of the current is

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directed against the city bank, the body of the river, in sweeping suddenly round, rising a little against the bank, as water rises when whirled rapidly round in a basin. But, even then, the chief danger to Surat is not from the Taptee overflowing its banks, but from the nullah which, it will be seen, intersects the city, and opens direct upon the river. The backwater in this nullah in times of flood rises to the height of the water in the river, overflows its banks, and deluges large portions of the city, ere the Taptee itself rises high enough to do any mischief. To avoid this evil, all that is necessary is to close the mouth of the nullah by a strong barrier of mason-work.

But Surat incurs another danger from the Taptee, against which it is high time that it should be defended. The whole force of the current during the monsoon being directed against the bank on which the city stands, that bank is gradually giving way, to the manifest peril of some of the most important quarters of the town. There are those still alive who remember a strip of land, about 200 feet wide, intervening between the river and the castle; and much younger men recollect the existence of a carriage-drive around the castle-wall. Now the river not only washes the base of the castle, but is visibly undermining it; from one end of the city to the other it is now in contact with the precipitous earthy bank, which it is so rapidly washing away, that, unless something be done to protect it, the very site of Surat will soon be a matter of speculation. Formerly, where most exposed, it was protected by piles, especially in front of what is supposed to have been the site of the Dutch factory. But the earth has long since been washed away from behind the piles, which now stand out from the bank in an advanced state of decay.

But it will not be enough simply to improve the ap-

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proaches to the harbour of Surat, for the harbour itself must likewise be improved, if we are to expect the trade of the place to be either maintained or increased. The export trade of the Taptee is divided between Surat and Randeer, the former almost, if not altogether, monopolising the import trade. Randeer, which is about two miles farther up the river, and on its opposite bank, was a port and a place of some note before the foundations of Surat were laid. Randeer is the outlet for the cotton exports of the districts of the Surat collectorate north of the Taptee, as also of some of the Broach districts bordering upon them and lying south of the Nerbudda. At this place, whence for the last three years no less than about 12,000 bales, or 6000 candies of cotton, have on the average been shipped, no accommodation, save such as has been provided by nature, has been furnished to trade, nor is there a single *stone, post*, or *plank*, to indicate that it is a place of shipment at all. The road from the village descends gradually to the water's edge by means of a very wide nullah, to one side of which, at its mouth, there is a natural shelf, several feet in width, in the otherwise precipitous clayey bank of the river. The pattimars come up one by one, for it is of very limited extent, close to this shelf, and are laden by means of a plank extending from them to the bank. As the cotton could not be carted from the nullah to the spot where the boats lie, it is not carted down the nullah at all, but tumbled out upon the dusty road, about a furlong back from the river. There is another reason for unloading here, viz. that the bales undergo a kind of inspection by a native before being shipped, the place of inspection being needlessly removed a considerable distance from the place of shipment. It is chosen, however, as being near the village, and as the place where a great deal of cotton, brought in as kuppas, is

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cleaned and pressed. The whole quantity shipped—both that which is brought in cleaned and pressed from the districts, and that which undergoes similar processes on the spot—is *rolled down the nullah,* through dust which is at places more than half a foot deep, in order to reach the place of shipment. It is then *rolled along the shelf* alluded to, and when the tide serves, is got on board across the plank. From the detriment which I have myself seen the loosely-packed bales receive whilst undergoing this process, I am convinced that, were there to be another inspection after shipment, much of that which is passed on shore would be condemned on board. Such are the means by which Randeer, which has been a port for ages, still exports its cotton.

Descending to Surat, we find things very little better there than at Randeer. A small wooden pier in front of the custom-house, and capable of affording accommodation to *one native boat at a time,* is all that has been offered in the shape of facilities to the trade of the place. A little farther down is a slanting stone jetty, on which passengers are landed in small boats from the steamers, which cannot approach the wooden pier. A more scandalous landing-place than this for passengers can scarcely be conceived, for there is no other port on the coast which maintains so constant and direct a steam-communication with Bombay. A pattimar of the largest class will contain about 200 bales, and can be laden at the pier in a day, the men working very hard to accomplish this. The average shipments from Surat for the last three years have been about 16,000 bales. At the rate of 200 bales a day, it would require eighty days to ship this quantity, or from thirteen to fourteen weeks, giving six working days to the week, there being an order against the use of the pier on the seventh. Now the shipping season for the *cotton of the year* cannot

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be held to have regularly commenced before the beginning of March, and is over by the 10th of May, lasting only for about ten weeks before it is closed by the approach of the monsoon. Thus, although it is generally an object to get as much as possible of the cotton of the year to Bombay before the setting in of the monsoon, it is no wonder, considering the paltry accommodation afforded for shipment, that sometimes not more than one-half the produce of the year reaches Bombay before that time. This too is supposing that the pier is used for nothing else than the shipment of cotton. But of the whole exports from the Taptee in 1849-50, amounting in value to about 395,000*l.* sterling, the cotton exports did not exceed in value 119,430*l.* sterling, or less than one-third of the whole. Deducting 50,000*l.* sterling as the value of the cotton exported from Randeer, we have scarcely 70,000*l.* as the value of the cotton exported from the city. The other exports from Surat amounted in value to about 275,000*l.* sterling. The shipment of exports of various kinds to the value of 275,000*l.* out of an aggregate value of 345,000*l.* must have materially interfered with the shipment of the cotton, which, taken alone, did not exceed in value 70,000*l.*, to say nothing of the extent to which it must likewise have been interfered with by the imports of the year, which amounted in value to 312,791*l.* The scramble by which such a trade manages to put up with such paltry accommodation, may be better conceived than described. In this scramble, cotton, from being a bulky article, less easily handled than many others, keeps possession of the pier to a much greater extent than its proportion to the whole trade of the port would indicate. The bales are rolled through the custom-house upon the pier, whence they are dropped from a considerable height at low water, one by one, into the pattimars.

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Such, after centuries of intimate commercial and political connexion with Surat, is the state in which we still find its port. Judging from appearances, one would imagine that it was a place only occasionally visited by the solitary trader, instead of having once been the emporium of a flourishing commerce, and being still the seat of a considerable trade. With an export and import trade now amounting in value to about three quarters of a million sterling per annum, it is destitute, as a port, of accommodations equal to those of the most ordinary fishing village at home. That Surat is a port not undeserving of attention is evident from the fact, that, notwithstanding the drawbacks presented to its trade by the neglected state of its river and harbour, its commerce has of late years steadily increased. During the fourteen years from 1823-24 to 1836-37, both inclusive, its average export and import trade amounted in value to 450,000*l.* sterling. During the five years ending 1841-42 it averaged 490,000*l.*; whilst during the five years ending 1849-50 the average rose to 560,000*l.* During the last year of this last period, it attained, as before stated, 708,000*l.* sterling. During the five years ending 1841-42 the exports exceeded the imports by about 320,000*l.*; during the first three years of the last period of five years the imports slightly exceeded the exports; but during the last two years of that period, we find the exports again in excess, to the extent, in 1848-49, of about 90,000*l.*, and in 1849-50, of 80,000*l.* These statements are taken from the only returns of the general traffic of the port which were procurable on the spot. Should the exports go on increasing, there can be no doubt but that a corresponding increase will take place in the import trade, more especially considering how favourably Surat is situated for the distribution of imports, as is shown by the extent to which it distributes salt for the

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consumption of the districts around it. The tax raised upon salt in the Zillah for the three years ending 1849-50 was as follows:

	Rupees.
1847-48	3,12,413
1848-49	3,82,259
1849-50	2,97,297

being an average for the three years of upwards of 32,000*l.* sterling. Of this, about 6000*l.* would represent the tax paid upon the salt consumed in the city and Zillah, leaving the remaining 26,000*l.* as that paid upon the quantity distributed amongst the neighbouring districts of Rajpeepla, Candeish, and Berar. The population of the Zillah is about half a million, so that it now distributes this bulky and heavy article of commerce to a population more than five times as great as its own. This indicates what it might do, with improved communications and an extended commerce in other articles, not only as regards the distribution of imports, but likewise the convergence upon itself of articles of export from vast regions in the interior.

The following items in the trade of Surat will not be an uninteresting addendum to those already instanced.

Statement showing the value of piece-goods and cotton yarn imported into Surat during the five years ending 1849-50.

Years.	Articles.	Value.
1845-46.	Piece-goods	4,62,348 rupees.
	Cotton yarn	1,62,852 „
1846-47.	Piece-goods	6,15,074 „
	Cotton yarn	2,25,914 „
1847-48.	Piece-goods	6,00,163 „
	Cotton yarn	2,44,717 „
1848-49.	Piece-goods	6,06,475 „
	Cotton yarn	1,99,760 „
1849-50.	Piece-goods	6,13,435 „
	Cotton yarn	2,03,768 „

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From the foregoing it will be seen that Surat imports, in a manufactured form, cotton nearly equal in value to the raw material which it exports. For the last three years of the period, its exports of raw cotton amounted in value to about 292,000*l.*, whilst its imports, of the manufactured article during the same time were valued at 244,000*l.* The piece-goods imported are chiefly consumed in the city of Surat, about one-fifth only of the whole quantity finding its way for consumption into the neighbouring districts of Rajpeepla and Candeish.

Statement showing the value of piece-goods and cotton yarn exported from Surat during the five years ending 1849-50.

Years.	Articles.	Value.
1845-46.	Piece-goods	6,74,749 rupees.
	Cotton yarn	1,606 „
1846-47.	Piece-goods	7,31,526 „
	Cotton yarn	1,100 „
1847-48.	Piece-goods	7,48,429 „
	Cotton yarn	.... „
1848-49.	Piece-goods	8,30,083 „
	Cotton yarn	5,102 „
1849-50.	Piece-goods	9,04,907 „
	Cotton yarn	32,403 „

The piece-goods given in this statement must be added to the exports of raw cotton, to ascertain the total value of all the cotton exports of Surat. With this addition, the total value for the last three years of the period will be about 540,000*l.*, of which 292,000*l.* is that of the raw material, and 248,000*l.* that of the manufactured article. The value of the cotton-yarn exported is not included, as that consisted of English yarn sent to Surat to be dyed, and is included in the imports given in the previous statement. From both statements it will appear how little

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English yarn enters into the manufacture of home-made cloths, either for local consumption or for export. For table-cloths, towels, and napkins, such as are manufactured in Broach, English yarn is chiefly, if not exclusively, used; but for the ordinary fabrics used as clothing by the masses, home-spun yarn is still the mainstay of the manufacturer, as is also the case in regard to such goods as he makes for export. Nor does the little quantity imported all enter into the manufactures of the district, a portion of it, as already seen, being sent to Surat merely to be dyed, after which it is re-exported. The proportion thus dealt with in 1849-50 was about one-sixth of the whole quantity imported. The piece-goods exported are almost all of Surat manufacture, and are sent to Bombay, to several of the other ports of Guzerat, and to Mocha Judda and Aden.

Proceeding northward to Broach, I have the same tale to relate, with the exception that there things are somewhat worse even than in Surat. The town is situated upon the north bank of the river, about thirty miles above its junction with the gulf, on an elongated mound, about eighty feet in height, running parallel with the stream, and forming, in fact, part of the bank. The subjoined diagram will illustrate the position of the town and its immediate adjuncts.

On the land side of the fort, as well as at both ends, the wall runs along the summit of the mound, descending on the river side to the level of the Nerbudda, which washes its base at high water, and along which it runs in a straight line for nearly a mile. The space marked *a*, and surrounded by a waving dotted line, denotes the principal suburb of the town at the base of the mound, the greater part of it around its north-western angle being now the chief seat of business, and the part whence the

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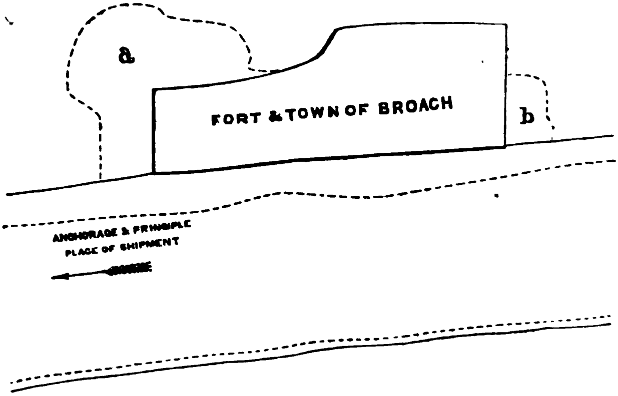

greatest shipments are made. The space marked *b*, similarly surrounded, indicates a smaller and less important suburb at the other end of the fort. In front of the town, the Nerbudda, at high spring-tides, is from three quarters of a mile to a mile in width. The ebb of the tide interposes a wide muddy beach, indicated by the dotted line in the diagram, between the bank and the shipping, which generally lie at anchor a little beyond low water-mark. So soft and yielding is the mud, that those who wade about in it sink up almost to the knees, every step they take.

Yet it is *over this slimy yielding beach*, which, at the chief point of shipment, is at low water nearly a furlong in width, that every article exported from Broach, or imported into it, has to be carried before it can be shipped or landed. It is the same too with passengers, who have to be carried to or from the vessels. Such is invariably the way in which cotton is shipped. The bales are first rolled down the dusty bank to the verge of the mud, into which they sometimes plunge from the impetuosity of their descent. Each bale is then lifted on the shoulders of six men, who stagger under their load up to the knees, and sometimes to the waist, in mud, to the pattimar. Is it any

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wonder that they should occasionally stumble with their load, which falls sometimes into the mud, and sometimes into the water? Such casualties are, generally speaking, made very light of, the damaged bales, when there is no one near to prevent it, being picked up and put on board with the rest. Over the mud, the top of which is baked by the sun, the men employed sometimes make a kind of roadway to the water-edge, by means of twigs covered with loose earth, rolling the bales on the tremulous pathway thus constructed as near the pattimars as possible.

Some, but comparatively little, cotton is shipped at the upper end of the port, where the accommodation is no better. The bank leading down to it, however, is very rough, and the bales, as they roll down, bound from point to point, not unfrequently bursting in different places and becoming saturated with the dust, clouds of which they raise in the air, in their headlong progress to the beach. Broach was not occupied by us yesterday. It has been ours since 1803; and after a possession of it for forty-eight years, this is no exaggerated picture of the state of its harbour, for which *literally nothing has been done*. The extent and importance of the trade of the Nerbudda, the proper conveniences for which are thus culpably neglected, may be gathered from the tables already given, where the trade of Broach, as part of that of Guzerat, is given in its absolute and relative proportions. In 1849-50 it contributed about one-sixth to the whole cotton exports of Guzerat, and about one-twelfth to those of all India; its exports then amounting in value to 235,532*l.*, out of a total export from all the Guzerat ports valued at 1,147,756*l.* Its total exports during that year were valued at 297,502*l.*, and its total imports at 226,858*l.*, making a total trade for the year, both export

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and import, of upwards of half a million sterling. During the ten years ending 1847-48 it imported piece-goods chiefly, if not wholly, of British manufacture, to the value of about 600,000*l.* Its imports of cotton-yarn fell but little short of 200,000*l.* during the same ten years.

The tonnage of Broach is considerable; and during the height of the shipping season the appearance presented by the river, with sometimes nearly 100 pattimars at anchor in it at a time, is very animating. Taking the average rates of freight given under a former head, and the average exports of the port as just given, together with the rates of freight upon the imports, which, generally speaking, do not much exceed one-half those upon exports, the value of shipping to Broach is upwards of a lac of rupees, or 10,000*l.* sterling a year.

The Nerbudda pursues a course of nearly 700 miles from its source in Bundelcund. For the greater part of that distance its channel is a succession of deep pools, with shallow rapids between. During the monsoon it is navigated for about 100 miles above its mouth, and about seventy above Broach, by boats of from ten to thirty tons burden. This navigation commences with the rains, and terminates about the end of the year. During the intervening period of dry weather and low water, it is navigable, to boats of from ten to fifteen and twenty tons burden, for from thirty to forty miles above Broach.

From the north bank of the estuary of the Dhadur, at a point about seven miles above its junction with the Gulf of Cambay, runs a small creek about five miles inland, in a direction somewhat west of north. About a third of a mile above the entrance to the creek is Tankaria Bunder, the shipping ground being its east bank at a point where it is about 150 feet wide. The only buildings near are the custom-house, a caravanserai built by the Guicowar, and a

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few villagers' huts. At a distance of about two and a half miles is the village of Tankaria. The country is a dead level in every direction, a dreary and unbroken waste, and gives no indication of being a port; but after Surat and Broach, it is the chief port on the eastern side of the gulf. Its export and import trade in 1849-50 amounted together in value to 454,000*l.* sterling. Of this its exports alone came to nearly 420,000*l.*, consisting chiefly of opium, its imports not exceeding 35,600*l.* The districts immediately dependent upon Tankaria Bunder as an outlet are comparatively limited, consisting chiefly of the strip of country lying between the Dhadur and the Mhye, including Jumboosur, as its greatest market-town; the districts south of the Dhadur, and between it and the Nerbudda, all depending, with but trivial exceptions, upon Broach. This strip of country contains many productive cotton-growing tracts, the produce of which will always find its way to market by Tankaria Bunder.

Tankaria is not well situated for becoming the port for the general traffic of a large district of country. The approaches to it are of the most difficult kind, the Dhadur being, from its mouth upwards, obstructed by mud and sand-banks of various sizes. At low water it is unapproachable, even by the smaller country craft, the Dhadur, for nearly half-way down from the creek to the gulf, having then but a foot or two of water in its deepest channel, which, during the dry season, becomes reduced to *six* or *seven inches.* Yet such is the port which was selected by the Baroda Railway Company as its intended outlet, not only for the greater part of the trade of Guzerat, but also for most of that of Malwa, and a large proportion of that of the north-west provinces. The bare description of the port at once establishes the impropriety of the choice. But although Tankaria Bunder can never be the entrepôt

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for a great general traffic drawn from extensive districts of country, there is no reason for leaving it in such a state as prevents it from properly meeting the exigencies of the local trade, which must ever, more or less, depend upon it.

Although Cambay is the principal harbour at the head of the gulf, it held but a subsidiary position amongst the ports of Guzerat. The rapidity with which the upper part of the gulf seems to be filling up, by the joint action of the Mhye and the Sabermuttee, and the strong south-westerly winds of the monsoon, would render it injudicious to venture a large expenditure upon it.

Dhollera is the most northerly of the three principal ports on the western side of the gulf. Properly speaking, Dhollera itself is no port, being an inland town, situated about four and a half miles from its nearest bunder. It is the market-town or entrepôt for a very extensive and very important district, and has two ports, Khoon and Bowlearee, the exports and imports of both of which are frequently given under the single head of Dhollera. Since 1846, Khoon has been its principal bunder. In approaching it, the navigation of the gulf is rather precarious, owing to the extent to which its upper portion is obstructed by sand-banks. From nearly the head of the gulf, down almost to the mouth of the Nerbudda, one huge sandy shoal extends, in some places approaching very near the shore, and being dry in parts at ebb-tide. So difficult is Dhollera of access by this channel, that vessels seldom make for it except when the prospect of fair wind and favourable weather is decidedly good. But if the difficulties of approaching it by sea are next to irremediable, that is a cogent reason why those which obstruct access to it by land should be lessened as much as possible. The character of the roads leading from the interior to Dhollera has already been given. The country between the town and its nearest and chief

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port is a flat sandy alluvium, with scarcely a tree or even a blade of grass to be seen upon it, and having a fall of a little less than a foot in the four and a half miles, great portions of it being inundated by the high spring-tides. No attempt has been made to form a road of any kind over this tract; whilst the want of one has been a very great drawback to the commerce of Dhollera. This has been particularly the case at the opening of each season, on the abatement of the monsoon. In the month of September, the merchants who have had their produce stored in Dhollera during the rains, at considerable expense, become anxious to get it shipped, particularly their cotton, to Bombay. But in September the country is still saturated with the heavy rains, so that the carts, in conveying the cotton to the port over the soft muddy ground, cut deep ruts in the soil. The carts are then compelled to make detours, to avoid the ruts already cut, in doing which they only form others; so that in process of time there is a tract of country upwards of a mile in width completely indented with them. Sometimes, although the distance between two points is only four and a half miles, they have to traverse an extemporised road of nearly nine miles in length, to reach the one from the other. Such are the means of communication between Dhollera and its port; and such they would have continued until this day but for the energy of a single individual, Captain Fulljames, whose name I have already had occasion to mention. In November 1850 was laid the first sleeper of a tramway, which was finished just before the monsoon, connecting Dhollera direct with its port. The cost of this tramway has been a little more than 1000*l.* per mile, or about 5000*l.* in all, the capital being 70,000 rupees in 700 shares of 100 rupees each, all of which, with the exception of about thirty shares held by Captain Fulljames and Captain Wal-

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lan, political agent in Mhyecanta, have been taken up by native capitalists in Ahmedabad. That the undertaking was one of some difficulty will be obvious, when it is considered that all the timber used had to be brought from the south of Surat, and some of it from places to the south of Damaun; that all the workmen had to be procured from Ahmedabad and its neighbourhood, increased wages having had to be given them to induce them to go such a distance from home; that all water for the use of the workmen had, so long as their work was near the custom-house or bunder, to be brought in carts for upwards of three miles; that their food had all to be procured four and a half miles off; and that it was necessary to erect temporary places of shelter for them whilst they worked along the greater part of the line.

The advantages which this tramway is calculated to confer upon the trade of Dhollera must be very obvious to those who have any knowledge of the circumstances of the locality. The native craft contrive to make their way to Dhollera as soon as the season opens, which is frequently, as already observed, in September, when the country is still reeking with the rains of the monsoon, which are not yet quite over. The tramway will enable the holders of cotton to ship it as soon as a boat can approach the port, which they cannot do at present without running the risk of its serious deterioration during its conveyance to the bunder in carts. This is supposing that a quantity of cotton is left in Dhollera during the monsoon, which need not necessarily be the case with the facilities for transport to Bombay which the tramway will afford. The cotton can, during the ordinary shipping season, be conveyed by it to the bunder in larger quantities, in much less time, and at a cheaper rate, than formerly, which will enable the dealers to avoid the expense

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of storing their goods for months at Dhollera. At the opening of the season, 8 anas (1*s.* sterling) per bale is the usual price paid for cartage to the bunder. It sometimes drops to 6 anas per bale; but during May, which is the height of the shipping season, it is much higher than this. Last year the shipments in the month of May amounted to 22,000 bales from Khoon bunder alone; and, considering the resources of the immediate neighbourhood, as regards the means of transport, a very high price must have been paid to have collected a sufficient number of carts for the purpose required. Some of the dealers admit having paid 12 anas per bale (1*s.* 6*d.* sterling) for 4¼ miles, and 10 anas was a very common rate during the month in question. The exigencies of the trade in this respect, between Dhollera and its bunder, formerly interfered very materially with the conveyance of cotton from the interior. Carts arrived at Dhollera with cotton from the districts, with engagements frequently to return for the conveyance of more; but their owners, on arriving at Dhollera, finding that they could make more by meeting the demand there, remained as long as the demand lasted, to the neglect of their engagements with their employers in the interior. The delay thus constantly occasioned in the arrival of cotton was not the worst result of this state of things; for large quantities ready for conveyance to the coast and for shipment were thereby thrown over the season altogether, and obliged to remain in the interior until its re-opening after the monsoon, of which, however, the owners of the cotton thus circumstanced could not take immediate advantage, without having to attempt the passage of roads which, for nearly a month after the re-opening of the shipping season, are almost impassable, and running the risk of a serious deterioration of their property, from various causes,

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during its conveyance over them. Thus, cotton ready for shipment in April has been frequently thrown over till October, and the execution of contracts often delayed for months, to the serious detriment of all parties concerned. Such was the case every season, and such it might have continued till doomsday, had not Captain Fulljames interposed with his tramway, which will render all the carts formerly used between Dhollera and the bunder available for the early transport of cotton from the interior. Another consideration which should not be lost sight of is, that cotton transported to the coast by the tramway will be free from the pilfering to which it has been exposed, at the same time that it will run no risk of deterioration from either dust or mud. Over the tracks already mentioned a pair of bullocks can drag 2 bales of about 12 maunds of 40 seers each (the seer being nearly equal to a pound); whilst two pairs of bullocks can drag three bales, and sometimes four, when the roads are in their best condition. By the tramway, one pair of bullocks can with ease drag eight bales to the bunder.

The importance of the port, the internal communications of which were thus consigned to a neglect from which they have been but recently rescued by the exertions of a single individual, may be inferred from the fact, that last year no less than 90,000 bales of cotton were shipped from Dhollera alone; and that the merchandise which, in the shape both of exports and imports, passed through it, during the same year, exceeded in value *one million sterling*. Of this about 555,000*l.* sterling represented the value of the exports, and about 445,000*l.* sterling that of the imports of the year. Its trade, too, has manifested a capability of rapid increase. In 1847-48 its export and import trade amounted in value to 628,000*l.*; in 1848-49 it advanced to 859,400*l.*; and in 1849-50 it

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exceeded a million sterling. During the same time the trade of Bowlearee declined nearly in the proportion in which that of Dhollera increased.

Captain Fulljames has recently been promoted from the command of the irregular horse at Ahmedabad to the political agency of Rewa Counta. His transference to the eastern may prove a great loss to the western side of the gulf, unless government shows some vigour in prosecuting the work he has so laudably inaugurated. It was his intention to have extended the tramway as far at least as Dundooka, about 15 miles distant from Dhollera; the country between the two points being, from its level nature, as well adapted for its economical extension as the tract between Dhollera and its bunder for the construction of the parent tramway. The advantage of such an extension will be appreciated when the position of Dundooka is considered. The cotton districts of the west extend from the Gulf of Cambay to the Gulf of Cutch, and in a north-westerly direction to Veerungaum and the Runn, extending northward, in detached tracts, almost into Marwar. From these different quarters cotton is now poured annually upon Dhollera from a distance of 60, 80, 100, and even 150 miles; almost all the cotton that reaches Dhollera passing through or close by Dundooka. At present a pair of bullocks take about 12 hours to travel, with a load of 1000 lbs. weight, from one point to the other; whereas, were the tramway extended, the distance might be overcome, even by bullock draught, in about four hours. In short, there is not an argument that can be advanced in favour of the tramway from Dhollera to the bunder which does not apply with additional force to its extension to Dundooka. From the level nature of the country, and the absence of nullahs between the two points, the tramway might be extended at about the same

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cost per mile as it has been constructed for between Dhollera and the bunder, viz. about 1000*l*. per mile. The extension would thus cost about 15,000*l*., and the whole line, from Dundooka to the bunder, not more than 20,000*l*.

Such are the chief ports in Guzerat, and such the state in which they are to be found down to the present hour. I could point to one of the many small fishing villages on the Frith of Forth, or to an insignificant harbour on the Moray Frith, visited only by a few miserable colliers during the year, on either of which more money has been expended by government within the last few years than has been applied to the improvement of all the harbours of Guzerat ever since that fine province came into our possession, although its trade, both export and import, now exceeds in value *four millions* sterling a year.

The question may be asked, Who is to blame for this disgraceful neglect of the obvious interests of the province? It may be difficult to say, considering the divided responsibility which characterises the whole system of Indian administration, to whom the greatest share of it is to attach; but certain it is, great blame lies somewhere between the different departments. If the local governments are limited in their power of action, they are called upon to make suggestions to the home government respecting the improvement of their districts. Had the Bombay government regularly done its duty to the public of India, and constantly urged the construction of works which they knew to be indispensable to the well-being of the country, they would, despite the obstructive efforts of the double home government, have effected very great improvements in the presidency. Let it not, therefore, be forgotten, when the East India Company comes again to parliament for a renewal of its powers,

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that, after nearly half a century of peaceable and undisturbed possession, it has left the fairest province of Western India, from which it has drawn so much and expects so much more, and its exactions from which have sometimes amounted almost to a general confiscation (*e. g.* Kirkland's assessment in Broach),—that it has left this province,—so rich, so fertile, so full of promise, and so susceptible of improvement; and that, too, in an age when even the most supine are more or less quickened with the desire for progress,—in a condition, as regards all its material interests, as backward as it is possible for it to have been in at the time of Arrian or Alexander the Great.

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BOOK II.

SOUTHERN MAHRATTA COUNTRY.

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CHAPTER I.

REVENUE SYSTEM — NEW SURVEY.

COTTON DISTRICTS — NEW SURVEY AND ASSESSMENT — OLD SYSTEM OF TENURE AND ASSESSMENT — ASSESSMENT ACCORDING TO CROP — GOVERNMENT SOLE LANDLORD — NEW SURVEY — MEASUREMENT AND CLASSIFICATION OF LAND — ASSESSMENT FIXED FOR THIRTY YEARS — NO REMISSIONS UNDER NEW SYSTEM — IS THE NEW SYSTEM AN IMPROVEMENT ON THE PREVIOUS ONE? — DEFECTIVE NATIVE HUSBANDRY — PROPRIETARY RIGHT TO LAND — ADVANTAGES OF NEW SURVEY — INCREASE OF AGRICULTURAL PRODUCE — WANT OF ROADS AND MARKETS — THE EXPORTS FROM THE DECCAN — PROPOSED PERMANENT SETTLEMENT — NECESSITY OF IMPROVED CULTIVATION — GOOD EFFECTED BY NEW SETTLEMENT — RATES UNDER THE OLD AND NEW SYSTEM — PROPORTION OF RENT TO PRODUCE — RELATIVE VALUE OF CROPS — COST OF CULTIVATION — CULTIVATOR'S PROFIT — INCREASE OF CULTIVATION AND OF REVENUE UNDER NEW SYSTEM — RECAPITULATION.

I HAVE now to direct attention to a part of the presidency differing widely, in many respects, from the district on which I have already reported. In its physical aspect, in soil and climate, in its fiscal management, and general social arrangements, the southern presents many points of striking contrast to the northern division of the presidency. In the one, tenures are almost as precarious and uncertain as ever they were; in the other, some progress, at least, has been made towards rendering them secure: in the one, rents are as *capricious* and *arbitrary* as before, liable to constant and sudden fluctuations; in the other, *fixity* has, to some extent, been given them for a determinate period: in the one, *no attempt whatever* has been made in the direction of material improvement, by the construction of public works of *any kind;* in the other, *something* has been

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done towards improving the communications, and developing the resources of the district. What the different attempts at amelioration, in connexion with these subjects, have been, it will be my endeavour to elucidate in what follows.

The southern Mahratta country comprises only a part of the southern division of the presidency. The division consists of the collectorates of Ahmednuggur (including the sub-collectorate of Nassick), Poona, Sholapoor, Belgaum, Dharwar, Rutnagherry (the southern Koukan), and the island of Bombay,—the whole, with the exception of the two last mentioned, being situated above the ghauts. In addition to these, it comprises, also above the ghauts, the recently lapsed territory of Sattara, which will soon be converted into a collectorate, and the still nominally independent state of Kolapoor. Its aggregate area is about 53,000 square miles, and its aggregate population rather above than below six and a half millions, being about 123 persons to the square mile. Of the foregoing area, the southern Mahratta country, which is, strictly speaking, confined to the collectorates of Belgaum and Dharwar, comprises only about 10,050 square miles, or about a fifth of the whole; whilst, of the aggregate population, it numbers upwards of a million and a half, or more than a fifth of the whole.

I have included Kolapoor in the division, because, although it has still its own rajah, the whole authority of the state is virtually wielded by the political superintendent. The revenue of the state, which is about 12 lacs, is both levied and expended under our direction. A not inconsiderable portion of the southern Mahratta country is still in the hands of jagheerdars, the descendants of the once-powerful feudatories of the court of Poona. Their numbers are gradually diminishing; their estates, which vary greatly in size, lapsing to government as they die without

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heirs. The jagheerdars have no longer the privileges accorded them under the Mahratta *régime*, being reduced almost to the condition of simple landlords; their estates, for all municipal purposes, being virtually under the control of the British authorities. The collector of Belgaum is political agent for the management of these estates. Thus the *whole of the southern division* may be regarded as *exclusively under British control.* The same cannot be said of the northern division; and it is important to bear in mind the position, in this respect, in which the southern division is placed, as it gets rid, here at least, of the excuse, so readily preferred by the partisans of government, that its inaction, as regards works of internal improvement, is to be attributed to the want of co-operation on the part of native states. The *whole country* and its *resources*, with the single exception of the incomes arising from the jagheerdar estates, are our own, to do with them as we like.

The cotton districts of the division constitute but a small proportion of its whole area, and are very unequally distributed. The number of acres planted with cotton during the current year (1851-52), in Poona, is 7324. The number planted in Ahmednuggur, two years ago, was 3609. I have no return later than this; but the probabilities are, that it has not increased. The number under cotton last year in Sattara was about 20,000 acres; this year it will probably be more. The commissioner is of opinion, that about 40,000 acres are available in Sattara for its culture. In Kolapoor the quantity of land planted does not exceed 8302 beegas (about 5000 acres). But Kolapoor is undoubtedly capable of giving much more of its area than this to cotton culture, considering the many valleys containing rich black soil which intersect it. But neither of the districts mentioned can ever be expected to do more in this respect than supply their own wants, if they can

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even manage to do that. The real cotton district of the southern division is to be found in the eastern sections of the collectorates of Sholapoor, Belgaum, and Dharwar, where they abut upon the Nizam's dominions. It is part of the great cotton-field of Hyderabad, which here, as it were, throws its fringe over the British border. In Sholapoor the quantity of land planted with cotton during the current year is 146,585 acres; in Dharwar 264,323; in Belgaum 160,584; and within the political agency of Belgaum 82,978 beegas—say about 60,000 acres. Thus the aggregate area planted for the year with cotton in the southern Mahratta country and Sholapoor is 631,432 acres, out of an entire aggregate for the whole southern division of 667,415.

Such being the position of the cotton-field of the southern division, it would be but natural to expect, that in prosecuting an inquiry having especial reference to cotton, observation would be confined to the section of country comprising the cotton district. And such would be the case, were it not that the southern Mahratta country is so identified with the rest of the Deccan as regards the financial experiment which is now being carried out in Western India, that to confine observation to any particular portion of it would be to take but a partial and imperfect view of the experiment of which it is the theatre. It is with the *new system* that we have now to deal; for whatever be the demerits of the *old system*, it is now condemned, and is rapidly passing away. Not only will the new system soon embrace the entire division, but it is already in active operation over nearly a moiety of it, that moiety comprising the cotton-field already described. In inquiring into its operation in the southern Mahratta country, I may frequently have to go elsewhere for illustrations of its working and tendencies, which will necessarily

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bring more or less under review the financial system of the entire Deccan. Another reason why I shall be compelled to extend my observations beyond the cotton district is, that in connexion with the subject of *roads*, and what has been done for their improvement, the Deccan is to be regarded as one rendering it impossible, without doing injustice to the subject, to isolate, in considering it, the southern Mahratta country from the rest of the Deccan.

In considering the new financial system known as the *new survey* and *assessment*, my object will be to ascertain how far it has so affected the relation both of government and individuals to land, as to impart to agriculture in Western India a stimulus unfelt by it before; and how far it is likely, in its future working, to advance the general interests of the country by improving the position and prospects of the agricultural classes. As no industry can flourish which does not at least repay the capital and labour expended upon it, and as neither governments nor corporations are the parties best adapted for the profitable application of capital or labour to land, the test whereby I propose to judge of the new system is, the extent to which it will, in the first place, render farming profitable, beyond mere subsistence, to the cultivators; and to which, in the next place, it will tend to raise up by degrees a numerous class of proprietors, intermediate between government and the cultivators, who will not only have an interest in the improvement of the land, but who will bring to the work of its improvement all the energy arising from the prospect of individual gain, and all the advantages of personal superintendence.

As it is necessary, in order to be able to form a correct judgment as to the character and merits of the new system, to have some idea of that which it is displacing, I propose,

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before entering into an analysis of the new system, to take, as it were, a bird's-eye view of the old.

In the Deccan, as elsewhere throughout India, the essential characteristic of society is its division into villages, which absorb amongst them all the land as well as all the inhabitants of the country. As in Guzerat, so in the Deccan, the village institutions are much impaired; but, in their partial dilapidation, they exhibit unmistakable traces of what they were in their vigour.

Large quantities of land are alienated throughout the Deccan, being held entirely rent free, on service condition; or subject to a quit-rent generally lower than, but sometimes even in excess of, the rent upon ordinary government lands. The alienated lands consist either of entire villages alienated, or of alienations for various purposes, within the government villages. The alienations of the northern Deccan are large, although the number of alienated *villages* is comparatively small. In the southern Mahratta country, on the other hand, the number of alienated *villages* is large; the jagheerdar estates, already alluded to, frequently comprising many such villages. There being reason to suppose that many of the claims to alienated lands were groundless, inquiries have for some time past been going on, for the purpose of ascertaining their genuineness. In the confusion which prevailed on the overthrow of the Mahratta empire, many claims were set up without the slightest foundation, into the authenticity of which, however, the British authorities did not think it politic at once to enter. This was particularly the case in the southern Mahratta country. In the latter days of the Mahrattas, a mamlutdar would empower an hereditary officer, who had a lien, to a certain extent, upon the village revenues, to collect the whole revenue; and after deducting his own share, pay the rest over to him. On the

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Company's acquisition of the country this man set himself up as an enamdar, treating the balance which he paid to the mamlutdar as the quit-rent payable to government for his enam. It was into claims like this that government, whilst the country was yet unsettled, shrunk from investigating. It is now actively examining into them; although it is to be regretted that this was not done somewhat earlier, as many of the present holders, who are summoned to submit their titles to investigation, have received their property from their ancestors with no knowledge perhaps of the mode of its original acquisition, whilst some may have, in other ways, become *bonâ fide* possessors. An enam commission has been labouring for some time with considerable effect, a good deal of land having through its means been reclaimed. When positive proof, either documentary or otherwise, against the validity of his title is not forthcoming, the holder is not called upon to establish his claim, but may retain possession of his land,—or rather a new title is conferred upon him, as conclusive and indefeasible as a parliamentary title under the Encumbered Estates Act in Ireland; and even when the utter groundlessness of a claim is established, the incumbent, during his lifetime, is not dispossessed, the land only reverting to government at his death.

Setting entirely out of view the minor tenures which here and there obtained, the tenures prevalent in the northern Deccan, at the commencement of the new survey, were *meerassee*, *ghutkoolee*, and *enamee*.

The meerassee tenure was undoubtedly that of the highest order, if not also that of the highest antiquity. The holding by meeras descended from father to son, according to the Hindoo law of inheritance, that of equal partition amongst the male heirs; nor could the holder's possession be disturbed, except for the non-payment of the

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government demands in respect of the land. And should the holder at any time abandon his lands, he or his heirs were entitled, after any lapse of time, to reclaim them, despite of any intervenient rights which might in the mean time have accrued in connexion with them. This right, barred by no statute of limitations, involved many inconveniences, retarding improvement by the insecurity which it threw around many tenures. This species of tenure had many privileges attached to it, such as investing the meerasdar with a right to sit in the village council, the property qualification in a Hindoo village! Although there has been a good deal of discussion on the subject, the general opinion seems to be, that the meerasdar was only liable for the rent of so much of his land as he actually cultivated, being exempt from any payment in respect of the uncultivated portion. Few traces of this tenure are to be found north of the Taptee, or south of the Krishna.

The lands held by ghutkool tenure were originally meeras lands, the owners of which had become extinct, or were supposed, from long absence, to be so. The occupants of the deserted meeras lands held simply as tenants at will, liable to be dispossessed at any moment, either by government or a meeras claimant. In many cases, however, the ghutkool lands had remained so long in the hands of the same families, that government could not dispossess them without outraging public feeling, although they might be at any time ousted by a descendant of the original meeras holders. The more recent holders of ghutkool lands, those whom government could dispossess, were known as oopree tenants, or tenants at will, and formed a very large proportion of the cultivators.

The enam lands were such as were held rent free, either with or without condition. Those held rent free

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on condition were divided into two classes: such as had been granted for lay or secular services, as for the duties enacted by a patel or watchman; and such as were set apart for religious purposes, comprising two classes, viz. lands granted for the support of religious establishments, and such as were given over to the use of those performing religious services.

To the foregoing may be added tenures by cowle, which consisted of a lease, of from two to seven years duration, of waste land, at lower rates than the standard assessment, the rent payable increasing annually, until at length the full rate was reached.

The most prominent of the minor tenures was perhaps that known as khasbundee, comprising lands of all descriptions, from the best to the worst sorts, on which a certain round sum was paid, whether all the lands were cultivated or not. This was a mode of turning inferior lands to account, as the good could only be held on condition of the bad being cultivated, or, at least, paid for. In the Canarese districts of the southern collectorates, a tenure somewhat similar to this was known as joodee.

Such being the prevailing tenures, the revenue was collected under a system of annual settlement and assessment. At the commencement of the year, the ryot agreed with the local revenue officers as to the quantity of land which he would cultivate for the ensuing season, and on this quantity he afterwards paid rent, unless he satisfactorily accounted for leaving any of it uncultivated. The assessment was made at two distinct periods, and on two distinct principles. The mowzawar or village assessment, determining the aggregate sum which the village was to pay, was made shortly after the crops made their appearance above the surface. When the crops were ripening, a second circuit was made by the local revenue officers, to

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ascertain in what proportion each ryot should share the aggregate burden of the village. The *individual* assessment was then made, when it was determined, *according to his means of payment,* judging chiefly from the character of his crop, what proportion of the aggregate village rent each ryot should pay. The *better* his *crop*—it might be from superior *industry,*—the *greater* his *ability,* and consequently the *more* he had to *pay.* The *poorer* his *crop*—it might be from *indolence,*—the *less* his *ability,* and consequently the *less* had he to *pay.* This was assessing by crop with a vengeance,—visiting industry with a fine, whilst indolence was let off with a *drawback.* It is no wonder that under such a system industry should languish, and that the most wretched, impoverished, and dispirited cultivators of Western India should to this day be found in the northern Deccan.

Such was the state of things in the northern Deccan anterior to Mr. Pringle's survey and assessment, which, for reasons which need not now be canvassed, soon fell to the ground. In Poona, where the new survey is now in progress, Mr. Pringle's measurements are in the main adopted; but an entirely new classification of the soil is in progress there, as if none had heretofore been made.

In the southern Mahratta country a very different system prevailed. There, from its being a border country, and the scene of incessant strife, every thing was in the wildest confusion; and tenures were of that precarious description which is characteristic of every state of society in which the holders of property are constantly changing, and the rights of property are only respected so long as they can be defended by force. With the exception of such as vested in the jagheerdars, scarcely a shadow of proprietary right was discernible during the latter days of the Mahratta ascendancy, of which government was not the sole

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depository. The great mass of the cultivators were mere tenants of sufferance, from whom was extorted every surplus article they produced over and above what sufficed them for a wretched subsistence. In process of time, a class of tenants, known as Chalee tenants, had sprung up, generally holding the best lands in the villages where they were to be found, and having a voice in the direction of the village affairs. Their tenure was originally like that of their neighbours, a tenancy at sufferance, which had become resolved into a *quasi* right of occupancy, by the land having been permitted for some time to descend from father to son. But they were, in reality, liable to be at any time as summarily dealt with as their neighbours; and if they were ejected from their lands for non-payment of rent, their holdings, whatever value they might possess over and above the balance due, passed as absolutely into the hands of the government, as would, in a similar case, the lands of the tenants at sufferance.

The system of settlement and collection was a harsh and impolitic one. A large district, yielding several lacs of rupees, was intrusted to the supervision of a revenue officer, whose establishment consisted of several mamlutdars and their subordinates. It was the duty of the local subordinates to determine the amount which each village was, in its corporate capacity, to contribute, the distribution of the aggregate sum amongst the villagers being left to the village officers. From their decision, the ryot, if he thought himself aggrieved, had an appeal to the mamlutdar, and from him, again, to the superior authorities; but the value of this power of appeal may be inferred from what has already been said of the powers, temptations, opportunities, and corruptions of the village and district officers, when not checked by the sense of a rigid responsibility.

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Towards the close of the Mahratta rule, the districts were farmed out to the highest bidders, who were armed with tremendous powers, and respected no man's rights; and who, through force or fraud, extorted from the unhappy ryots every thing which could possibly be squeezed out of them. The plan of procedure was a simple but efficacious one. A high nominal rent was put upon the land. If the ryot could not pay it, as much was taken from him as he could possibly spare; and the balance—for there was generally sure to be a balance—noted down against him as a debt to be recovered as soon as he was able to pay. Next year his whole surplus was again swept away, leaving perhaps another balance to be recorded against him. The third year might be one of extraordinary yield, when the ryot, from his surplus, might be able to pay his rent, and have a little to spare. But this little was seized in satisfaction of his outstanding balances, and happy was he if it left him, for the time being, unencumbered. The system was admirably adapted for keeping the cultivator constantly in the toils, by enabling his landlord to deprive him, *at all times and under all circumstances, of his entire surplus means*. The British authorities have, in some instances in which districts so situated have lapsed to them, insisted, and at first with very disastrous effects, upon the payment of the full nominal rent, or the abandonment of the land. How far, since their assumption of the government of the country, and anterior to the new survey, they practically continued the native system, let the number and amount of their remissions and outstanding balances attest.

There were many other features connected with the system to which I might here allude; but as the progress of the new survey is rapidly consigning the old régime to the domain of history, it would be a waste of time and

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space to dwell upon them here. To one, however, viz. *assessment according to crop*, I deem it right to make a passing allusion. That this system of assessment must have extensively prevailed, and heavily weighed upon the industry of the country, may be inferred from the fact, that it exists to some extent to this day in Belgaum; and this, notwithstanding Mr. Prideaux's assurance to the committee of 1848, that it no longer existed, as it was impossible, considering the minuteness of the reports which reached the India House, that a system so opposed to the oft-expressed wishes of the court should now exist any where in India without his knowledge. Yet I find in the collector's report in Belgaum, dated more than a year *after* Mr. Prideaux gave his evidence, the following passage, having reference to the talook of Cheekoree: "This practice of *collecting the rent with reference to the crop* is, I am aware, opposed to the wishes of the Honourable Court of Directors, and ought, in justice, to have been long ago discontinued. The early introduction of Captain Wingate's survey will now correct the faultiness of the system so long recognised, and under which the industry of the ryot is taxed to a most depressing extent."

Inestimable as may be the advantages which the new survey confers upon every district on which it succeeds, it has caused the prolongation of abuses in others, which, but for its promised advent, might have been removed years ago. Thus with Cheekoree. The foregoing extract was written in 1849, and things still remain there *in statu quo*, waiting for the new survey, which has not yet reached that talook. The same remark applies to other districts in the Deccan, in which the prevailing abuses remain untouched, in expectation of the introduction of the new survey.

Such being a hurried outline of the tenures and revenue

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system which prevailed in the Deccan anterior to the new survey, it is important to notice where then lay the proprietary right, with a view to ascertain what change, if any, in connexion with it, the new measure has introduced.

It is clear that in the southern Mahratta country no proprietary rights existed beyond those of the government and the holders of alienated land. In the northern Deccan, neither the oopree nor the ghutkool tenants could aspire to such rights; so that, unless the meerasdar possessed them, they were limited there also, as well as in the southern Mahratta country, to government and the holders of alienated land.

A very little consideration will suffice to show that a meerasdar fell far short of the measure of a proprietor. So long as the demands of the state *fell short* of the net produce of the land, leaving the balance to be enjoyed by the meerasdar, so long was he possessed of a valuable marketable property, which, had the state demands been fixed in perpetuity, would have constituted a proprietorship in the proper sense of the term. As it was, however, the value of the property depended partly upon the degree of confidence which people reposed in the forbearance of the state; for so long as the state set neither a temporary nor a permanent limit to its demand, and could at any time increase it *until it absorbed the whole net produce,* so long was the position of the meerasdar, whatever value his holding might otherwise have had, too precarious to admit of his being regarded as proprietor. However the produce of the land may be distributed, and by whatever names you designate the different parties sharing in its distribution, he and *he alone* is virtually landlord, who, having it in his power at any time to appropriate to himself the *whole net rent,* can thus at any time *shut out all other par-*

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ties from sharing in it. Such was the position of government towards the meerasee, as well as all other kinds of land not absolutely alienated; and so long as such was the case, government was the real proprietor, not the meerasdar.

Who, in England, wishing to buy land, would give thirty years' purchase—an ordinary price for a fee simple, or a complete proprietary title—for an estate, of the whole or the greater part of the rental of which he might at any time be deprived by a *power over which he had no control?* What Englishman, wishing to vest his money in land in India, would give the value of a fee simple for a meeras title, without at the same time taking ample security against the exercise of this power on the part of the government? It is no wonder that, without such security, meeras titles, even when they were much more saleable than now in unsurveyed districts, were frequently sold for three years' purchase as a fair equivalent.

In the government villages, then, government was sole landlord, with the exception of the owners of the petty patches of alienated land which they contained. In the alienated villages the jagheerdars and enamdars were landlords; but although they held amongst them a considerable portion of the land, their numbers were not sufficiently great materially to mitigate the character of a huge and overpowering monopoly which landlordism assumed in the Deccan.

Will the new survey remedy this? Will it revive agriculture in any or in all its branches? To do so, it must, with a more *extensive*, introduce also a more *skilled* husbandry. A more skilled means, to some extent a more expensive husbandry; which, again, implies the command of more means by the cultivators. This, again, can only result from a power of accumulation on

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their parts. They can only accumulate by farming being made more profitable to them, which it can only be by permitting them to retain a portion of the surplus produce of the soil. This implies a different distribution than now obtains of the profits of labour and capital applied to land. Will the new survey cause this new distribution to take place? will it tend to distribute the proprietary right, so as to admit of the duties of proprietorship being adequately performed? and will it put all parties in their proper position towards the soil and towards each other? If it do this, it will come up to the expectations which have been formed of it; but so far as it falls short of this, it will disappoint those expectations.

What, then, is the new survey? And first, as to its principle and manner of dealing with the land.

The fundamental principle of the new survey is that of a *strict ryotwar settlement on the sole basis of individual responsibility*. The assessment, which is laid for a fixed term of years upon each field, is levied from the ryot direct, so long as he retains his occupancy, and does not hold as the settlement of another, no ryot being liable in any way for the default of his fellow-villagers. The whole scheme is based upon a new survey and classification of the lands: the object of the survey being to determine the exact extent of each holding; and that of the classification, to ascertain the precise quality of the land, with a view to determining its rate of assessment.

The mode of procedure is as follows: When a district is to be surveyed, its primary division into villages is, of course, respected, the first business of the surveyors being to determine the village boundaries, which is done summarily whenever there is any dispute about them.

A village is generally found to be divided into differ-

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ent holdings, of various sizes and denominations, and held by a variety of tenures. The object of the survey is to divide the village into "fields," technically so called, of its own; these fields conforming to existing boundaries when practicable, but being by no means absolutely tied down to them. A field is taken to be as much as a man can cultivate with one pair of bullocks,—it being assumed that cultivation cannot be carried on with less than a pair. The extent of the field will, of course, vary with the nature of the soil, and the kind of management which it requires. The quantity cultivable by one pair of bullocks is, with certain exceptions, the least that a field can contain. When a ryot has but one bullock, he must enter into partnership with a neighbour who has another. When he has more than one pair, which is not unfrequently the case, he may either cultivate two fields, or two may be thrown into one; no field, however, being made larger than twice the extent of land capable of being cultivated by one pair of bullocks. Jungle land may be marked off into larger sections, as circumstances may require. They are called "fields" in contradistinction to "holdings;" because whilst a holding may, and often does, consist of but *one* field, so also it may consist of *more than one*. When a ryot takes one or more survey fields, he may subdivide them for his own purposes as he pleases, so long as he continues to pay the assessment upon the whole.

There are two things to be done with respect to these fields; the first being to determine their size and boundaries, and the second, the assessment which is to be fixed upon them. For these purposes the survey department is divided into two separate establishments; the one being intrusted solely with the business of *measuring*, and the other with that of *classifying* the land. When a district is marked for survey, the measuring establishment makes

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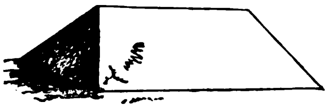
the first invasion of it, dividing into survey-fields the whole lands of each village, waste and cultivated, on the principles above adverted to. As the fields are measured off, a map of the village is prepared on a scale sufficiently large to show the position, form, and extent of each field. A map of each district is also prepared on a scale of two miles to the inch, sufficient to show the position and boundaries of each village, and the more prominent natural features of the country. These maps, specimens of which I append, are designed to facilitate the future collection of the revenue, and to enable disputes about boundaries to be easily settled, should the landmarks made use of be lost or destroyed.

One of the most important considerations connected with the survey, was the character, with a view to their distinctness and perpetuation, of the landmarks to be adopted to indicate the field-boundaries. A continuous ridge of earth round each field was tried, but found too expensive, and mere fragments of such a ridge, dispersed along the different lines, resorted to instead; each fragment or mound is about 15 feet long, from 4 to 5 feet wide at the base, and about 3 feet in height, sloping upwards from all sides of the base, so as to form a ridge at the top. It may be thus represented:



These mounds indicate the direction taken by the different field-lines, their number being determined according to circumstances. The actual angles of the field are indicated by stone slabs securely fixed in the ground; and it is at the angles that the greatest number of mounds is

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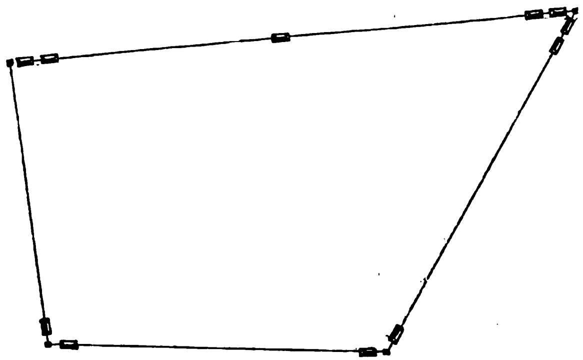
generally found, there seldom being any between two angles, unless the line between them be a long one. A field when marked off in this way is thus indicated:



The slabs indicate the corners, and the ridges of the different mounds the direction of the lines. In a surveyed district, the face of the country is covered with these mounds, looking like so many potato-pits. They are always constructed of the materials at hand,—of loose stone in rocky tracts, and of black soil where such soil prevails.

As a check upon the correctness of the measurements, the superintendent of the survey, Captain Wingate, under whose able, vigilant, and energetic direction every thing is done, visits the different districts after the departure of the measurers, subjecting any field or fields he pleases to re-measurement.

The land having been duly measured and marked, the measurers take their leave, and are followed, in due course of time, by the classifying establishment. The object of the classification is to determine the relative values of the different fields into which the measurers have carved the village. The elements which determine the relative values of fields are their *intrinsic qualities*, *external circumstances*,

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and the facilities which they may present for irrigation. The last is, strictly speaking, comprehended in the second, but it has been deemed of sufficient importance to constitute it a separate element. Both the first and the last are elements of *permanent* value; the second embracing circumstances which impart only an *adventitious*, and it may be but a *temporary* value to the lands. In dividing the land into different classes, the two points kept in view are its nature and its depth. The land is first divided into *three orders,* having exclusive reference to its *nature,* and being sufficiently comprehensive to embrace every variety of soil likely to come under the operation of the survey. These orders are as follows:

1st. Of a fine uniform texture, varying in colour from deep black to dark brown.

2d. Of uniform, but coarser texture than the preceding, and lighter in colour, which is generally red.

3d. Of coarse, gravelly, or loose friable texture, with colour varying from light brown to grey.

Were these three orders of *uniform depth* throughout, there would be no necessity for a further classification; but as they each *vary greatly in depth,* they are divided altogether into *nine classes,* for the purpose of determining the assessment which they are to bear. Thus the intrinsic permanent value of a field will depend, *first* upon the order of soil to which it belongs, and *secondly* on the depth of the soil. The greatest depth taken for the *best* soils in the *first* and *second* orders is $1\frac{3}{4}$ cubits, or about 3 feet; it being supposed that no depth beyond that adds materially to their power of imbibing and retaining moisture. The greatest depth taken for the *third* order is one cubit, that class of soil being seldom found deeper; whilst it is supposed that greater depth would not add much to its value. The first order of soil may fall within any of the nine classes, *ac-*

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cording to its depth. Thus, a field consisting of that order of soil of the *maximum* depth would be a first-class field; but a field of the same order of soil of but 1½ cubits in depth would rank with a field of the *second* order of the *maximum* depth, and be a second-class field. Again, a field of the first order of soil of but ½ a cubit in depth would fall as low as a sixth-class field, when it would rank with a field of the *second* order of soil of ¾ of a cubit in depth, and with one of the *third* order of soil of the *maximum* depth of one cubit. A field of the second order of soil can only range under eight of the nine classes; for no field of that order, even where of the maximum depth of 1¾ cubits, can rank higher than a second-class field. Again, no field of the third order, no matter what may be its depth, can rank higher than a sixth-class field, a fifth-class field of either of the two other orders being better than a first-class field of this order.

The following table, furnished by the survey, will illustrate this classification:

Class.	1st Order.	2d Order.	3d Order.
	Depth in Cubits.	Depth in Cubits.	Depth in Cubits.
1	1¾	...	...
2	1½	1¾	...
3	1¼	1½	...
4	1	1¼	...
5	¾	1	...
6	½	¾	1
7	¼	½	¾
8	...	¼	½
9	...	...	¼

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But this is not all. The foregoing is the classification only when the soils are found free from "an admixture of particular substances, or unattended by other circumstances which diminish their fertility." Thus, land of the first class in the first order, that is to say, the best black land of the maximum depth, may have a slight admixture of sand, or of small particles of limestone in it; or it may have a sloping surface, may be slightly impervious to water, may be liable to be swept by running water, or may have an excess of moisture from surface-springs. In either of these cases the land has a "fault;" and each fault which it has in this respect *degrades* it *a class* in the scale. Thus, if deep black soil of the maximum depth, that is to say, land of the first class, have a *sloping surface*, —this being a fault, degrades it to the second class, when it is on a footing with *similar* soil of *less depth*, and with *red soil* of the *same depth*. If, in addition to a sloping surface, it is *slightly impervious to moisture*, it has two faults, which degrade it to the *third class*, *each additional fault degrading it an additional class*. Then, again, if it has only *one* fault, it may have that *in excess*, which constitutes *two faults*, and has the same effect in degrading it as two faults would have. Thus first-class land with two faults, and *one in excess*, would have *three faults;* with *both in excess*, it would have *four*, which would degrade it to the *fifth* class in the scale. It is the same with the three different orders of land. Thus, first-class land in the third order, which is but sixth-class land in the scale of nine classes, would, by a fault of the above description, be degraded to land of the seventh class; and so on.

Were each field uniform in its faults and perfections, the work of classifying it would not be difficult; but the fields sometimes differ as much *in themselves as amongst themselves*, the same field frequently comprising several

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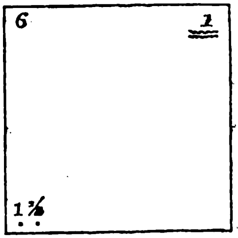
of the nine different classes of soil. In such case the field is divided in the measurer's book into as many compartments as it is supposed will embrace the different varieties of soil contained in it. Each compartment is then tested separately, and the results noted down. A hole is first dug to ascertain the depth of the soil; the hole never exceeding the maximum depth of the particular order of soil, when it happens to be of that depth. Of course, when it is of less depth, the digging is not continued beyond the depth shown. The depth being noted down, the next object is to ascertain what are the faults, if any, of the compartment or division of the field. These, if they exist, are also noted down, and the result obtained from all these circumstances combined. Let this figure



represent a compartment or division of a field; and suppose it to consist of the second order of soil: this is indicated in the measurer's book by the two dots at the lower left-hand corner. Suppose its depth to be 1½ cubits: this is indicated by the figures placed above the two dots. Now soil of the second order, and of 1½ cubits in depth, would, irrespective of other circumstances, be land of the third class, and would be so indicated by placing the figure 3 in the upper left-hand corner of the figure. But the soil may have a fault — as a sloping surface, for instance — which is indicated in the upper right-hand corner

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by an oblique line, thus /. In addition to this, it may be liable to be occasionally swept by running water, which is indicated thus ~~~~~~~~. Suppose, again, that it has this fault in excess; this is tantamount to two faults, the second being indicated by a repetition of the appropriate mark, as in the figure. The result is this, that the land, which, without faults, would rank as third class, is degraded three classes by the three faults which it possesses, and ranks only as sixth-class land: this is indicated by the figure 6 at the upper left-hand corner.

All the compartments of the field are thus dealt with, and the result as regards the whole field is obtained in the following manner:

The relative value of the different classes of land is determined by a graduated scale. Assuming, after the native mode of estimating in such cases, a rupee, or sixteen anas, as representing the value of first-class land, the respective values of the other classes are indicated by the following ratio: 14, 12, 10, 8, 6, 4½, 3, 2.

Supposing the field to have been divided into eight compartments, and that these compartments, having been tested by the principles and processes already explained, are found to range themselves under the following classes:

One of the 1st class.	One of the 6th class.
One of the 2d „	Two of the 7th „
Two of the 4th „	One of the 9th „

the value of the field would be determined as follows:

Class.	No. of compartments.	Value of compartments according to scale.
1	1	16
2	1	14
3	..	..

Class.	No. of compartments.	Value of compartments according to scale.
4	2	20
5	..	..
6	1	6
7	2	9
8	..	..
9	1	2
	8	$67 = 8\frac{3}{8}$.

Thus the average value of the field would be a little more than if it consisted entirely of land of the fifth class. The rent, therefore, which the ryot would have to pay for it would be somewhat more than would be demandable for so much land of the fifth class, whatever that might be. That, again, would depend upon the rate fixed upon first-class land; for whatever that might be, the rate upon fifth-class land would stand in the relation to it of 8 to 16, according to the scale.

The first circumstance to be noticed, of an external character, as bearing upon the value of the land, is the facility which it may present for irrigation. There are two classes of irrigated lands,—*garden* and *rice* lands, the latter being by far the most abundant. There are also two modes of irrigating,—by wells and by tanks, the latter being frequently formed by dams thrown across the courses of rivers. Garden-lands are chiefly irrigated from wells, but sometimes from tanks also, tank irrigation being almost exclusively that which is applied to rice-lands.

Another circumstance bearing materially upon the fertility of the soil is climate, which, in the collectorates above the ghauts, requires to be particularly attended to. With many minor differences arising from local peculiarities, the Deccan seems to comprise two very different climates, that of its eastern section being as dry as that of

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its western section, near the ghauts, is moist. During the monsoon the town of Belgaum may be deluged with rain, whilst the eastern talooks of the collectorate are being parched from want of it. Nay, so great is the difference sometimes in this respect, that you may find two places within ten miles of each other of which the same may be said,—the one may be deluged, whilst the other is parched. It is not from the south-west monsoon that many parts of the eastern section of the Deccan obtain their chief supplies of water, but from the north-east or Madras monsoon, at the commencement of which heavy showers fall, sometimes extending as far westward as the ghauts. It is evident, therefore, that similar lands may have very different values in a district having so great a diversity of climate.

Another consideration which is kept in view in determining the relative value of a field, is its distance from the actual village—the abode of the cultivators. The nearer the village, the more valuable a piece of land of a given quality is to the cultivator.

If I understand it right, the classification in Poona, where the survey is now in progress, is somewhat different from this, and is either in principle Mr. Pringle's classification, or a close copy of it. The land is divided into three classes—black, red, and burnt, or light, friable, and gravelly land. These, again, are each subdivided into three classes, so as to make nine classes in all, ranging, according to quality, in the following order:

Class.	Quality.	Class.	Quality.
1	1st black.	6	1st burnt.
2	2d black.	7	3d red.
3	1st red.	8	2d burnt.
4	3d black.	9	3d burnt.
5	2d red.		

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When a field contains several classes, their different proportions are ascertained as accurately as may be, and an average assessment put upon the field.

The relative values of the different kinds of land having been ascertained on the principles, and by the processes, referred to, the last duty devolving upon the survey is to determine the *absolute amounts of assessment* which, in different situations, the different classes of land should bear. It is evident that the nine classes, preserving in all cases their relative positions as regards value to each other, may be found so differently circumstanced as regards the external elements which bear upon the question of their absolute value, that a scale of assessment which might be reasonable when applied to them in one case, might be most unjust and inequitable if applied in another. Thus one district may be so peculiarly circumstanced, that any one of, or all, the classes may readily bear double the assessment that could be borne by the same class, or by all the classes, in another district close at hand. The first care, therefore, of the survey, in apportioning the assessment, is to ascertain, say in a talook, first, whether its circumstances are so uniform throughout as to justify a uniform scale of assessment; and if so, secondly, of what precise scale, whether a high or a low one, will the circumstances warrant the application? If the circumstances of the talook are not uniform throughout, the business of the survey is to divide it into districts, each characterised by uniformity of circumstances, and then to distribute the assessment amongst them, according to the character of their respective circumstances. Thus, if one group of villages is found paying more for lands than is paid for lands of similar quality by another group, the difference in their circumstances must justify the discrepancy. The circumstances which are supposed chiefly to influence the proper

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distribution of the villages into groups for this purpose are, *climate*—which, as already observed, affects less the relative values of the lands than the absolute amount of assessment they are capable of bearing,—*position with respect to markets, agricultural skill, and the actual condition of the cultivators.* The last-mentioned circumstance, however, is not taken into account,—the uniformity of assessment in a district, uniform in other respects, not being disturbed by any differences which may exist in the actual condition of the cultivators.

The villagers being arranged into groups, according to their respective advantages in point of climate, markets, &c., nothing remains for the survey but to determine the absolute amount of assessment which the different classes of lands in each group have to bear. This being the great aim and object of all that has hitherto been done, it is important, for the interests of all parties, that it should be properly and equitably effected. The survey does not determine what the district has to pay in the aggregate,—leaving the proportions to be borne by the ryots to be determined by the heads of villages, which was the old plan,—but the rates to be imposed upon the several classes of soil within the district. To do this, all that is necessary is, to determine the *maximum rates* for both dry and irrigated cultivation, from which, by the aid of the *classification scale*, the rates payable by the *inferior classes* of soil can easily be ascertained. The amount of the rates, as actually fixed, will afterwards be considered. This done, the settlement is complete; and the survey establishment, having seen the new system introduced, passes to a new scene of action, leaving the settled district, from that time forward, in the hands of the revenue officers.

The survey and assessment embrace alienated as well as government lands, in government villages; but villages

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wholly alienated are, I believe, exempted from them. But in cases in which they are extended to alienated lands, the owners are *not bound by the new rates*, their power of letting their lands on whatever terms they please not being interfered with.

On introducing the new assessment into a district, *it is declared permanent and unalterable for thirty years from the date of its introduction.* For that period government pledges itself not to *raise* the assessment fixed upon any land, upon any pretext whatever. The cultivator, therefore, has for this period the exclusive benefit of any improvements which he may effect, by digging or repairing wells, converting dry into irrigated land, by planting fruit-trees, by converting barren into arable land or otherwise. All antecedent cesses upon lands are absorbed in the new rates; and no survey-field is, on any ground whatever, to *be let for less than the survey rate.*

The introduction of the new settlement does not necessarily occasion any disturbance of possession, although it frequently changes a man's relation to the land. Whatever, from causes heretofore alluded to, may be the different dimensions of survey-fields, all holdings are now brought to their measure. If a man held before, by whatever tenure, as much land as has been carved into say three survey-fields, his holding is now one of three such fields. If a man held less than sufficed to make one field, he is now partner with one or more neighbours in the same predicament with himself, whose lands have been joined to his to make up a field. Government does not reserve to itself the power of ejecting him *so long as he pays the assessment;* and when he falls into arrear, he will only be ejected from as many fields, or share of fields, as the assessment on which will equal the balance due by him,—he, in such case, having the privilege of determining

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which field or fields, or shares, he shall relinquish, and which he shall retain. The ejectment for non-payment may in all cases be summary, except such as, from the nature of the original tenure, do not admit of such, where the collector is to 'observe the forms necessary to give his orders the force of a legal decree.'

When a holder of government land dies, he is to be succeeded in his fields or shares by his *eldest son* or *next heir.*

When two ryots hold a field, and one of them *dies without heirs*, or *relinquishes his share of the field*, the share is, in the first place, to be offered to the surviving or remaining ryot. Should he decline it, and no other party take it up, the surviving or remaining ryot *must relinquish his share too*, and *permit the field to become waste.* The same rule applies in the case of several joint-owners of a field, when one of them dies without heirs, or throws up his share.

The holder of a field may, on properly petitioning to resign, transfer the land to any other party who will undertake to cultivate it; in which case the name of the transferee must be entered in the government accounts as the future holder.

Waste land cannot be taken up for cultivation at less than the full rate of assessment, or in a less quantity than a field. When two or more ryots jointly take up a waste field, the name of *one only can be entered as holder;* but should the assessment of the field amount to 20 rupees, it may be entered in the names of more than one, provided the assessment payable by each does not fall short of *ten* rupees.

Land covered with dense jungle is, as already stated, divided into much larger fields than other land. From being unsuited, in their present state, for cultivation, no

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assessment is fixed upon them in the survey register. When a field of this kind is brought under cultivation, the mamlutdar is to impose rates of assessment upon the acres reclaimed, equivalent to the rates payable by similar soils in the village.

The grazing of all waste land, whether *government* or *meeras*, is to be annually put up to auction, field by field, the villagers in whose village the lands are having the preference as bidders. The bidding is not to go beyond the assessment in the survey register, the field being entered in the name of the last bidder, or of him who brought the bidding up to this point. Valuable grass lands, however, may be excepted by the collector from the operation of this rule, and may be disposed of on terms in excess of the survey assessment.

All petitions to resign any field or fields must be presented on or before the 1st of May of each year. In some villages, particular fields had particular houses attached to them; and the rule was, that a ryot relinquishing a field so situated should also abandon the house. The ryot may now, in all cases, retain his house after relinquishing his field.

The assessment is collected by four fixed instalments, the times of payment depending upon whether the early or the late crops preponderate. In a district where the early crops preponderate, the dates are, 15th December, 1st February, 15th March, and 1st May. Where late crops prevail, the payments are thrown back a month in each case.

Remissions form no feature of the new system. They may be conceded exceptionally,—that is to say, in cases of extreme urgency, or of general and overwhelming calamity; but in no other instances are they to be allowed.

Although the assessment in the surveyed districts is

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fixed upon the land for 30 years, and although the holders are exempt from any increase of it for that period, they are under no obligation to pay it for the whole of that period. The state agrees not to enhance its terms for 30 years; but the tenant is under no reciprocal contract to occupy the land and pay the fixed rates for 30 years. He may, in any year within the period, on presenting his petition in proper time, throw up the whole or a part of his holding; being in the one case entirely absolved from all further liabilities on account of the land, and in the other liable only to the rent of so much of it as he retains. In fact, his agreement with government is, *from year to year* to hold the land at the fixed rates; whilst the agreement of government with him is, that it will not raise the rates for 30 years, *if he choose* to hold it for that period. He has thus, say the survey officers, all the *advantages of a long lease* without the *risks* and *liabilities attendant upon one.* The reason assigned for this arrangement is drawn from the poverty of the cultivators; for it is asserted, that to devolve upon them leases of 30 years would be to impede rather than to promote their progress.

Such is an outline of the new revenue system of the Deccan, of which we have heard so much, from which so much is expected, and on which so many eulogies have been pronounced; which has been for some years in operation throughout the whole of the sub-collectorate of Nassick, the greater part of Ahmednuggur, and the whole of Sholapore; and which has recently embraced the whole of Dharwar in its operation, and is gradually extending itself over Belgaum and Poona. In the course of a few years more it will embrace the whole of the British territory above the Ghauts, when it is contemplated to extend it to Candeish and Guzerat. It is already in operation

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throughout the whole of the chief cotton districts of the southern division of the presidency. I did not think it advisable to interrupt the analysis just given of it by any comments upon its different features. I now, however, proceed to inquire into the merits of the system, and into its effects, both past and prospective, upon the agriculture of the country. Judging it by the tests heretofore proposed, is it an improvement upon the previous system? and if so, how far, and in what respects, is it an improvement?

In inquiring into this, the first point to be noticed is the last adverted to in enumerating the main features of the scheme; viz. the continuance of the system of *annual settlements* as regards the ryots, instead of binding them by long leases to their holdings.

The bargain is one ostensibly all in favour of the ryot and against the government. But one-sided bargains are always suspicious. Judging from the past policy of the government, which has always been, in connexion with whatever changes it introduced, to make as little sacrifice as possible on its own part, one might be very apt to suspect that it is not without some sacrifice on the part of the ryot, that it confers upon him the benefits of a long lease, without its attendant disadvantages. Is it that the rate of rent exacted under the new system is in excess of what the cultivator would readily pay under a long lease, were he as free to make his own bargain in India as in England? Or is the rate of rent exacted really as low as, in the case supposed, would be readily agreed to by the cultivator? If so, it is a question whether government does not commit a great error in not binding the cultivator as well as itself in the terms of a lease. The cultivator, under a sense of the responsibility incurred by an engagement for thirty years, would be more apt to turn his capital,

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his skill, and his industry to good account, and by such means improve the value of his holding.

One of the prime objects of the survey is both to induce and enable the ryots to accumulate capital. Yet the system of annual settlements proceeds upon the principle that, for the next thirty years at least, that object will be defeated. A long lease, entailing on him only just liabilities, and no risks beyond those which should properly be borne by the farmer, would, by engendering forethought and stimulating to exertion, with a view to providing against the liabilities of future years, necessarily beget in the cultivator those *habits* of accumulation, which, in their turn, would produce the *desire* for it as an active principle with him, stimulating him to the more rapid development of wealth, after all his liabilities had been provided for. But the natural tendency of the annual system is to perpetuate that carelessness and thoughtlessness on the part of the farmer, which will go far to prevent the accumulation of capital, to any great extent, at least for thirty years to come.

Description can but feebly convey any conception of the state of Indian husbandry. The natives have limited their exertions to the lowest possible point, and left the burden of the work to devolve upon nature. The land must be ploughed, which is generally done at the last moment, and in a manner singularly incomplete. When it is tenacious and indurated, a plough, consisting generally of a single strong wooden prong bent forwards, is used; but when it is comparatively free and yielding, as is usually the case with the black soil, the plough may consist of three such prongs, fastened into a strong wooden beam, from nine inches to a foot apart from each other. It is, in fact, more a harrow than a plough, and is drawn never by less than four, and frequently by six, bullocks; when

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there are, generally speaking, three men in attendance, the man who drives the last pair standing upon the beam of the plough or harrow, to make the prongs keep hold of the ground. Were the ground soft and plastic, like moistened clay, the track left by a machine so constituted would consist of three parallel furrows, about four inches wide and three deep, and from nine inches to a foot apart. When the field was ploughed across, a similar track would be left at right angles with the former; the intermediate soil, untouched by the plough, consisting of blocks of from nine inches to a foot square. It requires but a slight examination to discover, that whilst a large proportion of the soil has been thus left undisturbed, the remainder has been turned up only to the depth of a few inches. No attention paid to the after processes of husbandry will atone for remissness in connexion with this, the first and most important step; but as the after processes are conducted in a similarly imperfect manner, it is evident that the resources of the soil are but slenderly taxed.

It is not often that Indian husbandry soars so high as the use of manure. In some districts it is pretty freely used, but in many more very scantily, and perhaps in still more not at all. The want of carts and the expense of carriage are great drawbacks in this respect. It is very rare to find a ryot without one or two bullocks, but it is no uncommon thing to find him without a cart; and many who have carts have no wheels to them, the cart being of service to them only on condition of their being able to hire or borrow a pair of wheels. In the Deccan, the wheels, until recently, were generally made of stone; and stone wheels may yet be said to preponderate. They are sometimes made of solid wood, with a tire of iron around them, from two to upwards of three inches thick.

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The wood undergoes several preparations in oil, and becomes in process of time almost as hard as the iron which binds it. A pair of wheels of this description will cost from a hundred to two hundred rupees. With such apparatus as this, and that too but scantily provided, it is not likely that the heavy work of manuring can be very extensively conducted.

A better order of carts, having a decidedly European look about them, may now be occasionally seen traversing the main roads of the Deccan: they are built by parties employed by government for the purpose, there being a factory at Sattara, and another in the southern Mahratta country; they are sold to the natives in their perfect state for 35 rupees (*3l.* 10*s.*). For multitudes of ryots this is almost an impracticable sum for such a purpose; and the consequence is, that the use of these carts is yet chiefly confined to the main roads, on which they are employed, not for farming, but for carrying purposes. Many were at first given away gratis, that practical proof might be had of their superiority.

Such is the crude and unprogressive system of husbandry which is likely to be perpetuated by the arrangement alluded to. A better system can only be introduced by devolving upon the tenant his legitimate liabilities, in consideration of his tenure being *made secure*, and his rent being *reduced to an equitable standard.* And considering how much has yet to be done to put Indian agriculture on its proper footing, the violent fluctuations of the seasons, and the extent to which the climate predisposes to indolence, it is evident that greater encouragement is here needed, in the shape of secure holdings and low rents, than are necessary to bring the energies of the European husbandman into play.

Thus, on the very threshold of the scheme, we find the

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cultivators placed in a false position; a position which can only be satisfactorily explained on the ground, that government has a lurking suspicion that the rents demanded under the new survey are still *too high* to bind the tenant to pay for a long series of years.

The next point to inquire into is, the effect which the new survey has had, or is likely to have, as regards the *proprietary right* to the land. We have already seen, that under the old system that right lay chiefly with the government. Has the new system effected any beneficial change in this respect?

The promoters of the new survey assert that one of its main objects is to *create a proprietary right independent of the government;* and that with this view, wherever the survey is introduced, government *abdicates its proprietary right,* its demands in respect of the land being no longer *rent,* but a *mere tax upon rent.* So great a change in the landed system, which so thoroughly underlies the whole structure of society in India, amounts to a complete social revolution, and augurs well for the future of those districts into which it has been introduced, if it has really been introduced into any.

If government has abdicated its proprietary right, that right must have devolved upon the cultivators. Do we find, then, as we follow in the wake of the new survey, that it converts the cultivators into a race of peasant proprietors?

With some slight exceptions arising from peculiarities of tenure, of but little importance as respects the extent of land which they affect, the occupants of the land under the new survey and assessment are divided into two great classes,—such as hold meeras land, and such as are usually spoken of as the ordinary government tenants, being those who hold exclusively by the new tenure created by the

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survey. Such are, for instance, the *quasi* prescriptive holders of ghutkool lands, and the large class of oopre tenants, or tenants-at-will, of these and other government lands, who, from the moment when the new system commences to operate in the districts they inhabit, hold their lands by the tenure which it creates.

We have already seen that the meerasdar, under the old system, although he held heritable rights, held them, nevertheless, subject to conditions which left him far below the measure of a proprietor. At the same time the meeras tenure was the nearest approximation to a proprietary right which was suffered to grow up under the shadow of the all-pervading proprietorship of the government. To justify the assertion that the new scheme converts the cultivators into proprietors, all classes of occupants must be in a better position than the meerasdar occupied under the old system.

So far, however, is this from being the case, that the meerasdar himself holds a *less favourable* position under the new than he occupied under the old system. In the first place, whereas formerly he or his heirs could reclaim lands abandoned perhaps a hundred years ago, neither he nor they can any longer make such claim, let the abandonment have been for ever so short a time. Again, as already noticed, the prevailing opinion seems to be, that formerly a meerasdar was not liable for rent in respect of such portion of his land as he left uncultivated, which, or his right in which, whatever that might have been, although he paid no rent upon it, he could transfer, either by sale, mortgage, or gift, at his pleasure. But now, unless he pays rent upon the uncultivated portion of his land, government takes it into its own hands, and lets it to any tenant who will pay the survey rates upon it; or if, from pressure of population, there is a competition for its pos-

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session, the occupancy of such land is sold by auction, and the surplus proceeds, after satisfying the government demand, are handed over to the meerasdar. If, then, formerly he fell short of the measure of a proprietor, he certainly falls shorter of it now.

Indeed, with the single exception of his land still descending to his children by the Hindoo law of inheritance, there seems to be now no real difference left between the holder of meerassee and the holder of government lands. The exact position of the latter remains to be explained. He holds his land *subject to the fixed government rate, and cannot be dispossessed so long as he pays that rate.* But his engagement for the land is only an *annual* one, binding him to hold and pay for it, for only a single year at a time. But the terms are only known and certain for a *particular period,* for thirty years, beyond which the tenant knows not *on what terms* he may be called upon to hold the land, and beyond which his tenure cannot be regarded as indestructible, inasmuch as there is no certainty that it will not be destroyed by *the act of another.* The term *indestructible,* without this limitation put to it, is apt to mislead many into supposing that the tenure to which it is applied must be a proprietary or indefeasible one; whereas it is a tenure certain, as regards its terms, for only a limited period, and *defeasible at the end of that period.*

It is solely the *right of renewal* conceded to the occupying tenant, in preference to all others, that gives his holding whatever value it may possess over a simple tenancy from year to year at a similar rent. But this, which is its sole distinguishing feature from the lowest order of tenures, is far from constituting any thing like a proprietary title, especially as no one can tell what value it may have after

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the expiration of the period for which the assessment has been fixed.

The tenant can transfer his occupancy by sale or mortgage; or it may descend to his heir after his death, provided he chooses to occupy it on the fixed terms. But neither of these incidents to the tenure take it out of the category in which it has just been placed. At the end of the period for which the terms are known and certain, they will be called upon, as regards their continuance in occupation, to make a *new bargain* with the government, and may go on renewing their annual leases as before, provided they like the *new terms*, which government alone imposes, in the plenitude of its proprietary power.

Were any thing more wanting to show how completely the new survey practically repudiates the idea of government having abdicated its proprietary rights, it would be furnished by the terms on which joint occupants of survey-fields hold their lands. When one of them dies without heirs, or abandons his share of a field, the remaining occupant *must throw up his share*, although he may still be willing to hold it and pay rent for it, unless he chooses to occupy, or at least pay for, the vacant share also, or find some one else who will occupy the vacant share as co-tenant. When it is remembered that such co-tenancies are not always the result of *choice*, but sometimes of *compulsion*,—as when several small contiguous holdings are by the survey thrown into one, in order to constitute a full-sized survey-field,—it will appear a gross hardship to subject holders, as co-tenants, to such new conditions, when they are constituted into co-tenants whether they will or not. Before this, each holder occupied his little farm on the sole condition of *paying rent for it;* whereas now, each holds on the additional condition of *his neighbour*, over whom he has no control, *continuing to hold his.*

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If we fail to discover any thing like a proprietary right in the occupant, that right must still remain with the government. And so it does, *government being as much the proprietor of the lands under the new survey as it was under the old system.* With two exceptions, its position in this respect is precisely the same as before. It now contents itself with a *lower* rent than before, and binds itself *not to increase* that rent for a period of thirty years. But neither of these exceptions alters the essential character of its position; for a landlord may lower his rent, or bind himself in the ordinary terms of a long lease, without impairing in the slightest degree his attributes as a proprietor. By its engagement not to exact an increased rent for thirty years, government has only put one of its powers as landlord into abeyance for that time; at the end of which, the power thus voluntarily restricted will revive, when government will again find itself in a position to *exact what rent it pleases.*

But although the new survey has not converted the occupants into proprietors, it would be wrong to say that it is not its tendency to give a saleable value to their holdings which they did not formerly possess. If it has not conferred a proprietary right upon them, it has, always providing the government demand falls short of the net rent, created a something in their hands of a marketable character. His yearly occupancy, accompanied by his prior right of renewal, must, under such circumstances, have some saleable value to the occupant where population happens to be somewhat dense, and there is no arable waste, or but little of it, if any. The market value of such occupancies will, of course, chiefly depend upon the portion of the surplus produce left after paying rent and all out-goings to the cultivator, and upon the number of years which have yet to run of the period for which the

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maximum of the government demand has been fixed. In the southern Mahratta country a good many purchases have been made by traders with a little money, who have bought up the occupancies with a view to sub-letting them, but who, of course, would never think of giving as many years' purchase for them as for a fee simple. The highest category in which they can be placed is that of an unexpired lease for years, which is but a *chattel interest*, for which no one would think of giving the value of a *proprietary right.* This, so far as it goes, is undoubtedly a gain to the ryots, who formerly, with the exception of the meerasdars, whose holdings were sometimes dispensable by sale, had seldom any thing to which a saleable value could be attached.

Those who can make the nearest approximation to being proprietors under the new system are such as purchase occupancies with a view to sub-letting them; but such purchasers cannot be expected to deal with the land as a set of proprietors would do. The occupancies are and will be purchased on speculation, to be made the most of as long as any certainty attaches to them, which can only be until the expiry of the term for which the rent has been definitively fixed. Purchasers under such circumstances, whilst they draw all they can from the land, will return as little as possible to it.

What, then, has the new survey done, and what has it not done? It has to some extent stimulated agriculture by lowering rents, and fixing their maximum for a term of years, whereby it has created a species of property in the land, which, however, as regards both its saleable value and the interest which it gives its owner in the soil, falls far short of a proprietary right. Beyond this it has done nothing. Whilst the growth of an independent proprietary was one of the professed objects of its promoters,

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it has failed to confer upon agriculture that full encouragement which the creation of a numerous race of private proprietors would have given it; and whilst it has left the property in the land in hands which cannot, be the inclination ever so strong, adequately perform the duties of ownership, it has, as we have already seen, left the tenant in a false position, by withholding from him the incentives to exertion, which would have been supplied by binding him to cultivate for a lengthened period on terms obviously moderate and profitable to him. What is still undone must yet be done. And here is the evil for which the landed system of the country has been a second time unsettled,—it has not been rendered unnecessary to unsettle it again. The landed system lies more or less at the foundation of society in all countries, but particularly so in India, where agriculture is the sole occupation of so large a majority of the people; and it is greatly to be regretted, that when it was resolved once more to disturb it, it was not also determined to settle it, at once and for ever, on a sound and permanent basis.

Such I conceive to be the main defects of this important revenue scheme. In abandoning the old system, the departure has not been sufficiently complete; and its minor shortcomings are the necessary result of an attempt to reconcile incompatible principles, and to meet with a *half measure* the exigencies of a case which required the adoption of a *whole one*.

An objection of considerable gravity to the details of the new survey is, that it does not get rid of the necessity for *annual inspections*. I have heretofore pointed out the evils of that system, where the native officers on whom the duty devolves are corrupt, extorting from the ryot or defrauding the government. It is true that now the opportunities for acting corruptly are not so numerous as

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before; but they are still sufficiently so to offer great temptations to those who do not always deem it a virtue to resist. The chief object of the inspection, as it will in future exist, is to ascertain the extent to which the land is cultivated, or otherwise made use of, for the year, so as to protect government from being defrauded by parties throwing up fields, and then, whilst they remain unoccupied, making a surreptitious use of them.

We have seen that the land is measured, classified, and valued by the new survey. The measuring and classifying admit of a degree of exactness, which, it is to be feared, can hardly be carried into the absolute valuation of the soil, as conducted by the survey officers. Despite the utmost care on their parts, it is more than probable that very material inequalities will yet be discovered in their valuation. In countries where all parties are more or less free to act for themselves, where farming has been reduced to a science, and where all the elements which enter into the value of land are well understood, it is frequently a matter of great difficulty, even on the part of those well acquainted with local circumstances, to determine the value of a piece of land. Yet the survey assessors in the Deccan proceed, without hesitation, to determine the value of lands spreading over districts which in Europe would constitute kingdoms, and with the circumstances of the different localities of which they must be but partially acquainted. They have endeavoured to reduce a matter, dependent for its proper adjustment upon so many and such varied circumstances, to the certainty of a mathematical problem. With the theodolite, cross-staff, and chain, they sweep annually over vast tracts, determining values with equal facility in Belgaum and in Poona. So long as such a system is pursued, it could not be in better hands than those of Captain Wingate; but one may be

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pardoned for misgivings, lest, even under his able and vigilant management, inequalities should creep into the valuation sufficiently great and numerous to give rise by and by to serious complaints.

As the great object of the new survey is the improvement of the agriculture of the country, it must, to be at all successful, lead to the multiplication of agricultural produce, and its multiplication too at a ratio greater than that of the increase of population. But this will cause a material declension of prices (already very low), unless new outlets be found for the increased produce of the fields, either by an increase in the number of non-productive consumers at home, or by largely extending the export trade of the country. Should the increase of production be exclusively traceable to *improved* cultivation, the produce of the fields bearing a larger proportion than before to the labour and capital expended upon them, a decline in prices might not be productive of much injury, as lower prices might then be counterbalanced by greater returns. But should the increase be attributable, as there is reason to believe it would be, at least for a considerable time to come, more to *extended* than to *improved* cultivation, the decline of prices would be a serious evil; for in that case there would be no greater returns from a given surface to counteract the effects of lower prices. The result might be, that the glut of produce thus occasioned might, as it has heretofore done in other districts, utterly disable the ryot to pay his money-rent, reduced though it be by the new assessment. In fact, low as prices are, they might still descend so much lower, as to render it less practicable for the ryot to pay his reduced rent than it was formerly for him to meet the high and fluctuating demands made upon him. The difficulty can only be averted by increasing the demand for his produce either at home or

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abroad, or both. It will be a long time ere any increase can take place in the home demand which would alone suffice to meet it. Such an increase presupposes the rise and extension of various branches of human industry, which either have at present no existence in India, or are but languidly conducted where they do exist. It presupposes, in fact, the rise of manufacturing and industrial towns, and an enlarged commercial intercourse between town and country. At present, with the exception of the few larger towns, which are situated far apart, there are no towns in India which afford markets for the country around them. The larger towns are either civil or military stations, such as Poona and Ahmednuggur; or towns which, from peculiar position or accidental circumstances, combine trading with agricultural pursuits, such as Bagulkote and Hooblee. All the rest are mere agricultural villages, the inhabitants of which are producers as well as consumers of food, living in houses clustered together for mutual protection, instead of each man occupying a house upon his own farm. Both Hooblee and Bagulkote were villages of this description before they became known as trading stations. I have as yet met with but one village owing its rise solely to trade, and solely sustained by trade, and to it I shall have occasion by and by to refer. It is evident, then, that, for some time at least, the chief reliance against the evils of declining prices, consequent upon increased production, arising mainly from extended cultivation, must be upon an *enlargement of the export trade of the country*. But the export trade cannot be enlarged without greatly improving the means of communication between the interior and the coast, that is to say, *without greatly improving the roads*. It comes to this, then, that the *improvement of the roads is a prime condition to the success of the new survey and assessment.*

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But strange as it may seem, in this, which is so necessary to its success, lies the germ of its future disturbance. I have already shown that one of the chief elements in determining the absolute value of lands is their position as regards *great roads* and *markets*, and that the villages are grouped into different classes according to their position; in this respect, the different kinds of land in a first-class village of this nature being of course valued more highly than the corresponding kinds in a second, third, or fifth class village. The villages have been classified according to their position as regards *existing roads* and *existing markets;* and so long as nothing occurs to disturb this classification, so long will the absolute valuation of the lands based upon it require neither revision nor alteration. But how long will this be? Much, comparatively speaking, as may have been done in the way of road-making in the Deccan, the construction of roads *for commercial* purposes has yet to be begun even there; for, as I shall hereafter show, the roads already constructed have, with perhaps but one exception, no value beyond a mere military and postal one. Not only have no commercial roads been yet constructed, but their very lines have not yet been determined. One thing is certain, that when they are laid down, the routes of few of the present commercial highways will be followed. Produce, for instance, which is destined for Bombay, and which would soonest reach it by proceeding in a north-west direction, will not have to commence its transit to its destination by a long, difficult, and expensive journey to the south-west in quest of a port of shipment. Yet such is the fate of the cotton exported from the southern Mahratta country. Its market is Bombay, situated in a straight line about 300 miles to the north-west, to reach which, it has first to go by a road leading south-west to Coompta, at an average distance of about 125

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miles from the cotton-growing districts. It is quite clear that a new system of roads must sweep away anomalies like this. Yet it is with reference to such a state of things, and the markets which it has here and there conjured up, that the villages have been classified and the lands valued, as above mentioned. When new roads take new and more rational directions, giving rise to great marts in places where they now neither exist nor are dreamt of, both the classification and valuation will be to a great extent upset; and villages which are now in the first rank will find themselves thrown back by the new order of things into subordinate classes.

Such a change in the relative position of the villages will, wherever it takes place, in equity, require a revision and alteration of the absolute valuation of the land. For otherwise, a ryot now paying the highest rates for his land, on account of its superior position, would have to continue paying the highest rates for it after its superiority in point of position was gone; whilst a ryot paying inferior rates for his land, on account of its unfavourable position, might find it suddenly placed in the most favourable position, without any addition to his rates. Thus, whilst by such a change the position of two ryots, as regards the absolute value of their lands, may be completely reversed, their rates must, unless an alteration can be effected, remain as before. But *can* government, in view both of its engagements with the ryots and its own financial requirements, effect such an alteration of the rates as will meet the necessity and justice of the case?

In such a case, it must either *readjust* the rates at a loss of revenue, or *continue* them, with all the inequalities which the new state of things would engender. The new assessment was undertaken to get rid as much of *unequal* as of *excessive* rates; inequality of assessment being a se-

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rious evil, in leading, amongst other things, to different rates of profit upon soils of the same description. But so long as the term of thirty years has to run, no equalisation of rates could take place without government submitting to a material loss of revenue. For although government might within the term reduce the rates in any case, it has bound itself *in no case* to increase them. It could not therefore *increase the rent* upon the land raised in value by the change of circumstances; it could only do justice by *reducing the rent* of the land which had been deprived of its superior value.

So long as the chances of such a revolution in the value of lands amount to a probability, so long of course will that value be less than it otherwise would be, and the transfer of the saleable occupancies created by the new system be greatly restricted.

There are some who doubt the ability of the Deccan to export to any great extent, especially considering that it has to compete with Guzerat. But in the article of cotton, the Deccan already competes with Guzerat; nor will it be less likely to do so when, instead of having to approach the Bombay market by circuitous and expensive routes, it can do so by direct and comparatively cheap ones. When these direct routes are opened, the wheat, rice, and other grains, and the sugar of the southern Mahratta country, will be much more available for export than now; and not only so, but the western coast will then become the outlet for the pent-up produce of extensive regions in the interior, which now flows in occasional and shallow streamlets towards the coast of Coromandel. I need here say nothing of the facilities which such direct routes would confer upon the import trade of the peninsula. What renders the competition so keen which the Deccan has, as regards the export of grain, to

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encounter from Guzerat, is that the grain exported from the latter is principally raised in the neighbourhood of the coast, with numerous ports of shipment easily accessible to it. Besides, the export trade in grain is not always to be limited to an amount which the sea-coast districts of Guzerat can alone supply. There need be no fear of the Deccan, if it has fair play. The country which already, under circumstances by no means favourable, competes with its rival in cotton, need not fear that, when its circumstances are improved, it will have no share in the export of grain.

If such are the difficulties which beset the new survey and assessment, what other measure could have been adopted which would have been free from them, and which would, at the same time, have met the necessities of the case?

The evil was one of immense magnitude, requiring the application of a thorough remedy. The great, and indeed almost the only industry of the country was at the lowest point of depression, to which it had been forced down by a vicious landed system, the evils of which had been aggravated for ages by fluctuating but ever excessive exactions. To revive an industry exhibiting so few signs of energetic life,—to lift it, as it were, from the mire, and place it on solid ground; from being languid and stagnant, to render it both prosperous and steadily progressive,—such was the work to be performed; a work of no ordinary magnitude, and one which no half-measure, however cunningly devised, could achieve. The evil had taken root, grown up and flourished under the vicious system of annual settlements, with their concomitants of uncertainty, extortion, and corruption; and to remove it, it became necessary to depart from a system which had nourished it into such sturdy growth. For this purpose, a permanent

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settlement was tried in Bengal, and introduced into some portions of Madras; a ryotwar settlement, on a basis of excessive exaction, having been extended to the rest of that presidency. A variety of schemes had been tried in Bombay, and a temporary settlement (one of thirty years' duration) resorted to in the north-west provinces. But in all these instances, each scheme has been tried by itself, without the admixture of any other. It was reserved for Bombay to witness the trial of a cross between two of them, in the establishment of a temporary settlement with the system of annual settlements engrafted upon it. The tree has undoubtedly brought forth good fruit, but with many crabs. What else could have been expected? The combined system moves neither backwards nor forwards, but in an oblique direction, under the influence of two contending forces.

One course was open to the government, which, however, in all its financial experiments, it seems studiously to have avoided, viz. *a permanent settlement on the basis of a peasant proprietorship*. I am aware that the experiences of the past have not tended to raise permanent settlements in the estimation either of the Indian government or its critics. But a permanent settlement does not necessarily mean a *zemindary* settlement, which has proved so miserable a failure in Bengal, and which even in a modified and improved form broke down, in the course of a few years, in many portions of Madras. By the zemindary system the land is handed over at a fixed rent to a few great lords, against whose exactions the ryots are left shelterless, at the same time that their need of protection is evident from the ease with which the great landlords of a district can combine to oppress them. It is true that, in Madras, the zemindars were prohibited from exceeding the survey rates in respect to land already under cultivation; but as

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these rates amounted to 45 per cent of the gross produce, even when paid in kind, the protection thus afforded the ryots was of but limited advantage. The experiment which remains to be tried is, that of government abdicating its proprietary claims in favour, not of a few great landlords, but of *the actual holders and cultivators of the soil.* In this, it would only be doing what it professes already to have done; it would only be thoroughly carrying out what it declares to have been its honest intention in undertaking the new survey.

Such a measure would put the cultivator in his proper relation towards the land. He would be in a position which would enlist his best energies in the cultivation and improvement of his farm. It would further stimulate agricultural improvement and the development of agricultural wealth, by placing the proprietary right in the hands of those who not only could acquit themselves of proprietary duties, but whose interest it would be to do so. Landlord and tenant both could and would then co-operate for the attainment of a common end. It would give land a market value far higher and more extensive than it has hitherto possessed; for the purchaser would feel that he was really securing a property in the land when he knew the precise limit of the government demand, not for thirty, twenty, fifteen, or ten years, but for ever. If, under these circumstances, agriculture in India did not steadily progress, its improvement would indeed be hopeless.

Whatever may be thought as to the necessity of such a measure for the promotion of agriculture in general, there is scarcely room for a second opinion as to its necessity *so far as an increased growth of cotton in the southern Mahratta country is concerned.* I have already observed that the result of the new survey and assessment is, for a considerable time at least, far more likely to be an *extended*

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than an *improved* cultivation; inasmuch as it is far more likely to lead men without capital to take up waste land, than to attract capital to the improvement of land already cultivated. But although an extended cultivation will give rise to an increase of the aggregate amount of farm-produce, it will of itself add but little to the production of cotton; for the cotton field is a limited one, not only as to extent, but also, in the main, as to locality. The black cotton soil is, as before intimated, found in the greatest quantity close to the Nizàm's frontier. It is already well occupied, and farmed in as slovenly a manner as other soils are. Except in Uthnee, and at some other points along the Krishna, and in parts of Sholapore, there is now scarcely any cotton-ground to be found unoccupied. The produce of cotton, therefore, would be but slightly increased by the mere *extension* of cultivation.

The increase in the cultivation of cotton which has of late years táken place in some parts of the southern Mahratta country, does not conflict with this; for that increase, which was stimulated a little by the new survey when first introduced, has now, except in a few places, reached, if it has not now overstepped, its limits. Take Dharwar as an example of the progress which has lately been made. The breadth of land cultivated with cotton since 1842-3 has been as follows:

	Acres.		Acres.
1842-3.	184,264	1847-8.	199,405
1843-4.	178,956	1848-9.	204,516
1844-5.	185,186	1849-50.	241,250
1845-6.	175,767	1850-1.	254,982
1846-7.	190,825		

From this will be seen how slowly the cultivation crept up until 1849-50, when the stimulus of very high

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prices induced the ryots to devote more land to cotton than, in the observance of a proper rotation of crops, they should have done. But this could not long be continued, and nothing is more likely to check it than the low standard at which prices now rule. Much has been said about the red soil of the Deccan, particularly of its adaptability to the production of the American variety. But I have never seen a field of purely red soil under cotton of any kind,—the American cotton being frequently planted in the fine black mould, but more generally to be found perhaps in districts where red soil is intermixed with the black, the latter, however, invariably and largely preponderating. The surface capable of producing either variety within the British territory is thus limited, neither the purely red nor the light soils being available for the purpose. Could the new survey be extended across the Nizam's frontier, there can be no doubt but that it would lead to a largely increased growth of cotton; for there there are vast tracts unoccupied of the immense cotton-field, of which that in the southern Mahratta country is but a mere fraction. Any thing, therefore, which would lead simply to an *extension* of cultivation in the state of Hyderabad, would lead to an enlarged production of cotton. But in the southern Mahratta country, *improved* cultivation is absolutely indispensable to a material increase of production.

But as an improved cultivation means a more skilled cultivation, requiring the application of more labour and capital to the land than are now bestowed upon it, it may be feared by some that a higher cultivation must necessarily, with increased production, lead to *higher prices* in India. If so, the prospects of the Indian cotton trade would, at least for some time to come, be poor indeed. But this is not so. Agriculture in India is yet in its

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d Land

Number.	Remis fo current	Remission for current year.	Balance outstanding on account of current year on Aug. 1, 1850.			Per-centage of waste in 1849-50 to the whole culturable Land entered in column 2.		Arable Land waste in 1849-50.		Revised Survey Settlement, when introduced.
	11	21.	22.			23.		24.		25.
	R.		R.	A.	P.	A.	G.	A.	G.	
1	. .	. .	. . .			8	17	28,448	18	1840-41
2	727	. .	7,602	15	7	38	12	1,45,514	39	1844-45
3	1,051	. .	5,171	2	4	28	0	95,799	5	1844-45
4	2,307	. .	385	9	0	44	18	1,15,459	28	1844-45
5	. .	. .	6,621	6	1	34	12	63,415	35	1844-45
6	. .	. .	. . .			6	25	10,773	12	1840-41
7	30	. .	182	6	0	8	14	18,865	7	1840-41
8	1,043	. .	524	2	9	14	22	36,829	32	1840-41
9	. .	. .	446	8	4	26	34	69,780	2	1843-44
	5,159	. .	20,934	2	1			5,84,886	18	

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infancy. The very implements used are still of the rudest kind; so rude, that an agriculture depending upon them for its conduct must necessarily be in a backward state. Agriculture in India has, therefore, yet to be carried to a point at which the labour and capital expended upon it will derive *greater* proportionate returns from the land than now. It follows that the necessary tendency of improved cultivation in India must, for some time to come, be towards *lower* instead of *higher* prices; for as returns augment in greater proportion than expenditure,—in other words, as the *cost of production is lessened*, prices can afford to fall. What is wanted at present in India is not high farming, in the ordinary sense of the term, but the application of a little more capital to the land, and greater energy in prosecuting the *existing methods* of agriculture; both which would, for some time to come, lead to enhanced production in a greater ratio than that in which the amount of labour, capital, and skill employed was increased. There are other circumstances which may also be relied upon as conducing to the same end,—the lowering of prices,—such as the infusion of greater energy and intelligence into the cultivator, the additional confidence with which continued tranquillity and security will inspire him, and the improvement of the communications of the country. And what is still better, as regards the prospects of the Indian cotton-trade in this respect, the large tracts of cotton-growing land of a superior quality which are yet unoccupied must be brought into cultivation up to the point at which labour and capital will be most remunerative, before either inferior lands will be brought into cultivation, or a higher cultivation be adopted with regard to the superior lands, which would equally have the effect of raising prices. It is true that the unoccupied tracts in question are within

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the limits of a native state; but that, especially with improved communications, will not materially retard the natural progress of events, even should Hyderabad and Berar remain much longer under the rule of the Nizam. The time, therefore, when India need fear a rise in prices, as the accompaniment of a higher cultivation, would seem to be at a considerable distance. Nor need she fear it even when it comes; for when it is reached, and prices do rise, the exigencies of American cultivation, which is pursuing the same course, will be similar to those of her own.

I am aware that the picture here drawn of Indian agriculture in its present state, seems, at least so far as the culture of cotton is concerned, to conflict with the statements of some of the American experimentalists, to the effect that they could suggest no improvement in the Indian *mode of cultivating* cotton. But the conflict is more seeming than real. That the Indian ryot may have hit upon the *right mode* of cultivating cotton, is quite compatible with the assertion that his agriculture is backward and slovenly, and that his returns are meagre. A man may hit upon the right way of doing a thing, and yet not do it thoroughly after all. Theoretically, the ryot may be correct in his processes; yet, practically, he may be most backward in turning them to account. For this, a variety of causes may be assigned; such as imperfection of tools, viciousness of tenure, want of energy and confidence, and difficulty of access to market. With the fact before them, that an acre of land like that in the southern Mahratta country yielded, on the average, but little above 60 lbs. of clean cotton, when an acre in America yields, on an average, from 250 to 300 lbs.; the American planters, in making the statement alluded to, could not have meant, that whilst the ryots required no teaching

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as to the manner of cultivating cotton, their knowledge of it was turned to the best account in producing the largest possible crops. It is not enough that the business of raising cotton should be well understood, unless it is at the same time vigorously prosecuted.

One of the results anticipated from the new survey is a rapid increase of population, consequent upon an increased production arising from an extended agriculture. The same result would accrue, and probably to a greater extent, from a permanent settlement, leading, as it would do, to an improved as well as an extended cultivation. Had cultivation in India been already brought up to the point before alluded to, the increase of population would, by increasing the demand for agricultural products, raise the value of land by raising prices; and unless the prices of cotton should go up with the prices of other produce, it would go out of cultivation. But it is because cultivation in India is yet so far below that point, that this consequence of the increase of population need not be dreaded until the time came, when, as regarded cotton, it could be met without difficulty; so that one can thus, for some time yet at least, afford to contemplate with complacency an event which would add to the value of land without necessarily raising prices.

It were idle to deny that the new survey, whatever may be the imperfections which attach to it, has been productive of good. In fixing for a term of years the maximum amount of the rent to be paid, it has, aside of all other reforms, effected an improvement; for so long as the demands of the government were liable to yearly fluctuation, it was impossible that cultivation should be conducted with either spirit or success. Even supposing, then, that the fixing of the rent had not been accompanied by any reduction of its amount, a step would have been taken

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of no little importance to the industrial economy of India. But this step—the fixing of the rent for thirty years—has been rendered doubly valuable by the *reduction of rent*, which has been its concomitant. To whatever other results this double arrangement may lead, certain it is that, under it, it will at least be in the power of the ryot to obtain a decent subsistence from his holding. Even of this he was not certain under the former system, whose principle was to extract from him every thing but what was indispensable to sustain animal life, leaving him frequently, even under these circumstances, a creditor for outstanding balances. Nor was the line always carefully drawn between what he could spare and what was absolutely necessary for the supply of his physical wants; the extent to which he was robbed having been determined more by his plunderer's necessities than his own. It is no wonder, then, that both he and his family had frequently to eke out their wretched existence by a resort, before harvest-time, to wild herbs and roots. If, under these circumstances, any man contrived to enjoy the semblance of a decent subsistence, it was generally by rendering himself, as did most of the heads of villages, the local instrument of the common oppressor, or by managing, under the imperfect surveys which then obtained, to hold more land than he was rated for. Such was the condition of the ryots in the Deccan, not only anterior to the establishment of British rule over it, but between the whole period which elapsed between that event and the introduction of the new survey. Indeed, in many instances, sometimes through ignorance, but often through a determination on the part of the revenue officers not to let the revenue suffer in their hands, the screw, which seemed long ago to have received its last turn, was tightened instead of relaxed by us. The native system was

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one which could not possibly admit of the inflexible exaction of the *nominal rates;* for as these were far higher than the returns on the average of years could justify, nothing was left for the government but to content itself with less for the time being than its nominal demand, and make the ryot its debtor for the balance. It seldom ejected its tenant, leaving him his farm, with just life enough in him to till it. But the British authorities, adopting for some period the native nominal rates, insisted upon the alternative of their *full* payment or the abandonment of the land. Such a course seemed worse than a general confiscation of property; for, in a country where the land is almost the sole source of subsistence, it came like a sentence of death upon whole districts. It was impossible long to maintain a system which must speedily have resulted in the depopulation of the country, and hence the schemes which have at different times been tried for the improvement of the Deccan. The last of these, the measure now under consideration, relies upon a *reduction of the rates* as one of the indispensable elements of its success. The necessity for its speedy establishment throughout the entire Deccan is evident from the fact that, in all the districts into which it has not yet been introduced, the old system continues in force; modified in some respects, it is true, but still exercising the same obstructive influence as before, as regards agricultural enterprise, although its harsher features have been softened by the practice of *remissions* and *balances.* A reduction of rates, then, for a determinate period, and to an extent which will enable the ryot readily to meet his rent on the average of years, and secure a comfortable subsistence for himself and his family, is an improvement to be hailed by every well-wisher of the country; and if the reduction has been carried to a point

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which will permit the ryot, after securing the reasonable wages of labour, to touch, to however small an extent, the *profits of farming*, its value, both as regards the individual and the public, cannot well be over-estimated. Not one of the least important results of the measure, if it proceeds thus far, is the saleable value which it so generally confers upon the ryots' occupancies; the fact of their possessing which, in any degree, is in itself evidence that a great step has been taken; although, as has been already shown, their actual market value is greatly limited by considerations connected with the new measure itself.

I proceed now to inquire to what extent the rates have been reduced, and what it is that is left to the ryot after their payment, and after providing for the ordinary outgoings incident to cultivation.

It is extremely difficult even to approximate an average of the rates payable, or paid, upon the different descriptions of land under the old system. The materials for striking such an average for a large extent of country are not accessible; and even if they were, they would be too voluminous to be readily made use of. In many districts the range from the highest to the lowest rates was much greater than in others, even where the same descriptions of land prevailed in both. In Belgaum, for instance, the rate upon dry crop-lands is sometimes found to be as high as 15 rupees per acre, which is considerably above the average rent per acre in Great Britain. It is only found so high, however, under unusual circumstances, and when the land, either from position or otherwise, possesses some very peculiar advantages. On the other hand, it is sometimes found as low as 2 pice, which is the sixth part of an ana, which, again, is the sixteenth part of a rupee. Garden-land is found as high as 42 rupees (4*l.* 4*s.*) per acre,

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and as low as 6 pice; rice-land as high as 40 rupees, and as low as 1 ana 4 pice. These are the old rates; but they yet prevail in all but the four talooks of the collectorate into which the new survey has as yet been introduced. The average rate upon all descriptions of land in Belgaum, calculated upon the whole revenue, and the whole area in cultivation and otherwise in use, is, or rather was, before it was disturbed by the new assessment, 12 anas 8 pice, or a little more than three-fourths of a rupee an acre. This is far below the average in the Guzerat collectorates, and is to be accounted for by the vast tracts of unproductive land to be found in the Deccan. It is by these tracts of rocky and light or gravelly soil, that the general average is brought so low, at the same time that the better descriptions of land, including cotton-land, paid about as high rates in the Deccan as they did in Guzerat. In Dharwar, where the assessment was, on the whole, more uniform, the range previous to the new assessment was not so great. Dry crop-land was sometimes found rated at 7 rupees; a rate which, in *ordinary* seasons, it was impossible, considering the character of the cultivation, for it to have paid. The land so rated was the pure black soil, the best fitted for the production of cotton. Dry crop-land, again, especially in villages where wet cultivation prevailed, has been found as low as one ana per acre; but such land was, of course, unfitted for the growth of cotton. To find the exact average pressure with which the old assessment bore upon cotton and other lands, it would be necessary to know not only the whole revenue and the whole number of acres in cultivation, but also the relative proportions of the different descriptions of land, and the aggregate sums paid by each of them. This, however, is not procurable; but judging from the most authentic information I could obtain, I should say that the rates payable in Dharwar

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upon lands adapted for the growth of cotton ranged from 1 rupee to 3 rupees per acre, the average being rather above than below 2½ rupees.

If it is difficult to procure accurate information as to the average pressure of the rates upon particular descriptions of land under the old system, it is also so under the new; for though the *relative* values of the different classes of land are fixed and unalterable, their *absolute* value is made to depend chiefly upon position, at the same time that the revenue returns do not distinctly state how much is derived from the different classes in one position, and how much in another. Nor is the rate paid by a given class of soil in a given position *always the same;* for the *best* position in one district may be equal to only a *third-rate* position in another. Thus in the Bunkapoor talook, in the Dharwar collectorate, first-class land in the best position is rated at 1 rupee 12 anas, which is the rate upon first-class land in the *third-rate position* in the Dharwar talook, where 2 rupees 4 anas is the rate upon first-class lands in the best position. It is this complexity of the system which renders it so difficult *from general returns* to acquire any thing like an accurate idea of either the proportions of the general burden borne by the different classes of land in the different positions as regards markets, &c., in which they are found, or the average pressure of the rates upon any one description of land, such as cotton land, throughout the collectorate. Should the reports of the revenue officers become by and by more minute than the collectors' reports at present are, it will be possible to arrive at a reliable average of the rates paid upon the different classes of land. At present all that is accurately obtainable in this way is the *general* average upon all descriptions of land in the collectorate, which is about 1 rupee 6 anas per acre, as calculated upon the

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average of the gross land revenue for the years 1848-9 to 1850-51 inclusive, which was 11,87,484 rupees, and the average cultivation for the same period, which was close upon 870,000 acres. The rates upon land-growing cotton have a tolerably wide range, say from 10 anas to 1 rupee 10 anas per acre. It is sometimes found growing on land rated higher than this; but, for reasons to be presently alluded to, these lands are generally otherwise appropriated. I should say that the average rate upon cotton-growing land in Dharwar was from 1¼ to 1½ rupees; say 1 rupee 6 anas, which is about the average upon all the lands of the collectorate.

There is also a difficulty in ascertaining the exact extent to which the rates have been reduced upon the different descriptions of land. We know, for instance, that 2 rupees 4 anas is now the maximum rate paid, under the most favourable circumstances, upon dry land, whereas it was occasionally as high as 7 rupees before. But this only shows us the reduction which has been effected in the case of first-class land thus exorbitantly assessed; but not the average reduction upon first-class land generally, which could only be had by first obtaining the former average rate upon such land, which would not be easy to obtain. Here, again, we have authentic data for general averages where those for particular ones fail us. For several years previous to the revised assessment, the average extent of cultivation in Dharwar was 615,921 acres, whereas in 1850-51 it was 868,318 acres, being an increase, since the introduction of the survey settlement, of about 40 per cent. Taking the same periods, we find that the revenue has remained almost stationary; its average for the ten years previous to the new survey having been 11,32,481 rupees, and for the three years during which the survey has been extended to the whole collec-

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torate, 11,87,484 rupees, showing an increase of only about half of one per cent. Thus, whilst cultivation has increased 40 per cent, the revenue has increased but about half of one per cent, which is almost equivalent to its having remained stationary. The general reduction of rates, therefore, has been about 40 per cent. This reduction must of itself have been a great relief to the country. If the farmers could just manage to live before, they have now a little margin left for profit. If they could only live before by having balances left outstanding against them, they may now be able to get along without such a millstone about their necks.

To get at the exact state of the farmer's circumstances under the new survey, is not one of the least of the difficulties to be encountered. As the new rates, unlike those of former experiments, are now fixed without reference to a particular portion of the crop, they afford us no clue whereby we can arrive at the average value of the gross produce. The rent is generally estimated at a fifth of the gross returns; a great improvement, certainly, upon the ryotwar settlement of Madras, under which the government abstracted no less than 45 per cent of the produce. And should the present rates in the Deccan be found not to exceed 20 per cent of the produce, the advantage of the fixed settlement for thirty years will be that, by every improvement in cultivation, the government proportion of the produce will be diminished. If it is a fifth now, it might, by improved culture, be reduced to a tenth; whereas had the settlement been based on the principle of government taking a certain proportion of the returns, the government share would have increased with every increase of produce. That the rates, however, amount to a fifth of the present gross produce, is a mere floating impression; but whatever proportion they may now bear

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to it, the tenant, until the expiry of the fixed term, will have the exclusive benefit of every improvement in culture.

In Poona, as already shown, the soil is divided into three orders, each order being subdivided into three classes, giving nine classes in all. The following are the highest and lowest rates attached to the different classes:

Classes ..	1.	2.	3.	4.	5.	6.	7.	8.	9.
	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
Highest Rates	1 12 0	1 6 6	1 4 6	1 0 0	0 12 0	0 9 6	0 7 0	0 5 6	0 3 6
Lowest Rates	0 12 0	0 9 7	0 8 0	0 6 10	0 5 2	0 4 0	0 3 0	0 2 6	0 1 5

The average rate throughout the collectorate, calculated upon the cultivation and realisable revenue of last year, was 13 anas 12 pice, or about 1*s.* 8½*d.* per acre. But taking Poona throughout, its soil is about the poorest in the Deccan.

The following is a statement of the maximum rates for first-class dry crop-land in Dharwar, according to the position of the villages in which it is found, with reference to the external elements of value heretofore alluded to:

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Talooks.	Groups of villages having different rates of assessment.	Number of villages in each group.	Maximum rate per acre for 1st class dry land in each group. R.	A.	P.
Dharwar	1	7	2	4	0
	2	53	2	0	0
	3	3	1	12	0
	4	23	1	12	0
	5	19	1	8	0
	6	18	1	1	0
	7	9	0	14	0
Hoobly .	1		2	0	0
	2		1	8	0
	3	3	1	5	0
	4		1	4	0
	5		1	3	6
	6	21	1	1	6
	7		0	15	0
	8	27	0	14	0
	9	49	0	10	6
Bunka-poor	1		1	12	0
	2		1	8	0
	3		1	6	0
	4		1	4	0
Hangul .	1		1	8	9
	2		1	3	6
	3		0	15	0
	4		0	10	6
Khode .	1	30	1	6	0
	2	134	1	4	0
	3	64	1	0	0
	4	17	0	12	6
Ranee-bednoor	1		1	6	0
	2		1	4	0
Nowl-goond	1		1	5	0
	2		1	2	0
	3		1	0	0
Dummul	1		1	2	0
	2		1	0	0

Compare this with the former rates, which were in many cases capriciously imposed, instead of being determined on a system like those now in force. The following are the highest rates on dry crop-lands under the old system:

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	R.	a.	p.		R.	a.	p.
In Dharwar	5	0	0	In Khode	2	0	0
„ Hooblee	6	0	0	„ Raneebednoor .	3	1	0
„ Bunkapoor . .	5	8	0	„ Nowlgoond . .	4	0	0
„ Hangul	4	12	0	„ Dummul . . .	4	0	0

The following will show the former and present rates, both highest and lowest, upon irrigated and garden lands:

	Irrigated land.						Garden land.					
	Highest rates.			Lowest rates.			Highest rates.			Lowest rates.		
	R.	a.	p.	R.	a.	p.	R.	a.	p.	R.	a.	p.
Dharwar:												
Old rates . . .	10	0	0	4	0	0	None.			None.		
New rates . .	6	0	0	1	0	0						
Hooblee:												
Old rates . . .	5	0	0	1	8	0	None.			None.		
New rates . .	4	2	0	1	5	0						
Bunkapoor:												
Old rates . . .	16	0	0	3	12	1	49	10	0	11	0	0
New rates . .	2	8	0	1	12	0	14	0	0	5	0	0
Hangul:												
Old rates . . .	16	0	0	5	0	0	52	0	0	5	8	0
New rates . .	5	0	0	1	8	0	20	0	0	8	0	0
Khode:												
Old rates . . .	8	0	0	4	0	0	20	0	0	11	6	0
New rates . .	4	8	0	1	15	6	4	6	0	9	0	0
Raneebednoor:												
Old rates . . .	2	8	0	0	14	0	18	8	0	8	12	0
New rates . .	1	2	0	0	10	0	11	0	0	9	0	0
Nowlgoond . . .												
Old rates . . .	None.			None.			None.			None.		
New rates . .												
Dummul:												
Old rates . . .	None.			None.			None.			None.		
New rates . .												

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The rates as regards the remaining eight classes of land, descend from the highest in the ratio of the graduated scale already given. Thus, to find the value of third-class land in any group of villages in Bunkapoor, for instance, all that is necessary is to find what proportion of the amount at which first-class land in the group is rated stands in the same relation to it as twelve does to sixteen. The whole range upon dry land is from 2 rupees 4 anas to 2 anas per acre.

The average rate upon all classes of land in the collectorate is, as we have already seen, 1 rupee 6 anas per acre. Of course, to ascertain the exact proportion which this bears to the average produce, some approximation must be made to that average. This is not easy where land varies so much as it does in the Deccan. Its average productiveness is considerably below that of Guzerat. I have before shown, that in ordinary years a beega of land in Broach, which is equal to about half an acre, will produce about 150 lbs. of seed-cotton, from which about 50 lbs. of clean cotton will be procured; being at the rate of 300 lbs. of seed-cotton, and nearly 100 lbs. of clean cotton, *per acre.* Now, in Belgaum the computed average yield of seed-cotton per acre is, of New Orleans 8 maunds, and of native 10 maunds of 28 lbs. each. In Dharwar the average is computed at 8 maunds of New Orleans, and about 9 maunds of native. This would give in Belgaum 280 lbs., and in Dharwar 252 lbs. of seed-cotton, of the native variety, to the acre, the return being, in either case, less than that in Broach. But this is not all; for if it is less in seed-cotton, it is still more so as regards the clean article; for whilst the yield of clean cotton from Broach kuppas is nearly a third, that from native cotton in the southern Mahratta country seldom exceeds a fourth. Taking 9½ maunds, the common average for the whole district, we have 266 lbs. of native seed-cotton, and only

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66 lbs. of clean cotton to the acre, against nearly 100 of the latter to the acre in Broach. The yield of clean cotton from the New Orleans plant is larger, being fully one-third; but then the yield of the seed-cotton is less. The native seed too has a value, as food for cattle, which the American seed has not, all which must be taken into account when a balance is attempted to be struck between the profits of the two rival varieties. The last year's crop of native cotton was purchased from the ryots at from 9½ to 10 anas per maund, and of New Orleans at from 13 to 13½ anas. Setting the New Orleans cotton out of view for the present, its cultivation being as yet too limited greatly to influence the result as regards the entire district, let us see what is the pecuniary value of the returns of an acre of native cotton. Taking 9½ maunds as the average yield for a series of years, and 9 anas per maund as the average price, we have within a fraction of 86 anas, or 5 rupees 6 anas, as the value of the produce. This brings the average rent on cotton-lands of 1 rupee 6 anas to within a fraction of 25 instead of 20 per cent of the gross produce.

But it may be said that this result is confined to cotton-land when growing cotton; and that if other produce be taken into account, the general impression, making the rent about a fifth of the gross produce, will be sustained. As the average rent upon cotton-lands coincides with the general average upon all lands—the reason for this being, that the high-priced wet lands are included,—it is necessary to sustain this impression, and to show that the cotton-land yields a larger return in other products than it does in cotton. The fact that the most high-priced dry lands, such as pay 2 rupees 4 anas per acre, are not, generally speaking, devoted to the culture of cotton, but to that of grain of various kinds, would seem to bear out

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the idea of its so doing. But we must not forget the influence of *position* in determining the direction thus given to cultivation. If, upon the lands thus highly rated, cotton is seldom grown, it is because their neighbourhood to large towns, such as Dharwar and Hooblee, makes it more profitable to raise grain upon them than cotton,—from the generally higher prices obtainable in such places for grain, and the constancy and certainty of the demand; and also on account of the extent to which the straw of jowarree, baijree, and wheat, but particularly that of jowarree, is in demand for fodder for cattle. But these same lands differently situated would not make so profitable a business of the raising of grain; and such is the case with the great bulk of good land in the collectorate. The land most favourably situated is most highly rated, because, from its position, it brings greater money returns,—no matter from what crop. First-class land in Bunkapoor is intrinsically as good as first-class land in Dharwar, and will produce as good crops of grain; yet the one is rated at 1 rupee 12 anas, whilst the other is rated at 2 rupees 4 anas, so that the proportion between rents and money returns may be the same in both. In the outlying districts grain is not so easily disposed of, and is chiefly raised for consumption on the spot, and for the sake of the straw. But cotton is, in all the districts, sure of a market; so that it may be much more to the ryot's advantage to raise cotton than grain upon the bulk of the good land of the collectorate, although it might be more to his profit to raise grain than cotton upon it were it all circumstanced like the corresponding classes in the vicinity of Dharwar and Hooblee. In the bazaar at Dharwar wheat may be had, including the retailer's profit, at 6 pice (about ¾*d.*) a seer—the seer weighing about 3 lbs. 5 oz. In England, farmers fancy themselves ruined when wheat

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is at a penny a pound; but here are 4 lbs. and upwards for a penny by retail. But in the purely rural districts the price paid to the farmer will be much below this. The extreme lowness of the prices of grain throughout the districts generally may be inferred from the fact, that some peons, or messengers in the government service, have no more, by way of remuneration, than 2 rupees a month. This is the lowest rate in the scale of government pay, and is calculated on what a man *with a family* can manage to exist upon, taking the price of grain into account. Of course, a party so situated will have to live on the lower kinds of grain; but the prices of the higher kinds are low in proportion. It is not too much to assume, then, taking all grains into account, that the grain-crops on the great bulk of the dry land, with which the cotton-land is incorporated, are *not more valuable* than the cotton crops; so that 5 rupees 6 anas may be safely assumed as the average value of the returns of all kinds from such land. It might be shown that, as the average rental upon all the land in the collectorates is the same as that upon good dry land, including the cotton-lands, the average returns from all the lands, including the irrigated and the poor dry lands, are also about the same as those from the good dry lands. But it is unnecessary to go into this; it being sufficient, so far as the proportion borne by rates to returns is concerned, to know that the greater the returns, whether from first-class dry lands in the most favourable situations or from irrigated lands, the higher the rates they have to pay; and the smaller the returns from the poorer dry lands, the lower the rates charged upon them. On the classes of lands, then, which include the cotton-lands, the average rate is, in *ordinary* years, about 25 per cent of the average gross produce.

The cost of cultivation is a subject on which, in all

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countries, a considerable conflict of opinions will be found to prevail; and India, in this respect, forms no exception. It is a point to which the attention of the servants of government, both European and native, is seldom directed; which sufficiently accounts for the confusion of ideas which prevails, and the conflicting statements which are made respecting it. From all I could learn on the subject, from the different sources to which I applied for information, it appears to me, that 2 *rupees per acre* is, except in the case of irrigated lands, and in cases in which land is well manured, when the cost is greater, about as near the truth as one can well come. This was the cost of cultivating the government farm in Dharwar; and if the tendency is to extravagance in all government experiments, that tendency was greatly, if not wholly, counteracted in this case, by the desire of the planters to make their outlay bear as small a proportion as possible to their returns. In Sholapoor, where cultivation is more backward, the cost is frequently not more than 1½ rupees per acre; but even in that collectorate the average is supposed to rise close to the 2 rupees. The cost is about the same whatever may be the cultivation, whether grain or cotton; and when cotton, whether it be native or indigenous. Let us see then what are likely to be the profits of the farmer of the best classes of dry land (such as include the cotton-lands), after his rent and necessary outgoings are provided for. In doing so, let us make the average extent of holdings of dry land,—in Dharwar for instance, which, as we have already seen, is 24 acres,—the basis of the calculation.

Outgoings.

	R.	a.	p.
Government rent or tax on 24 acres, averaging 1 rupee 6 anas per acre	33	0	0

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	R.	a.	p.
Cost of production, at 2 rupees per acre	48	0	0
Wear and tear of implements, &c.	5	0	0
Total	86	0	0

Returns.

	R.	a.	p.
Returns from 24 acres, at the average of 5 rupees 6 anas per acre	129	0	0
Deduct outgoings	86	0	0
Farmer's profit	43	0	0

This includes the interest upon stock, of which a farmer of twenty-four acres will have about 100 rupees worth, the interest being 9 per cent. Such are his profits in an ordinary year, when the crop is a fair one, and the price is good. Taking a series of years, his profits will not come quite up to this; for although, in good years, when his crops are abundant, or prices are high, he gets a larger return, the unfavourable years preponderate. The price I have taken as the average, too, is somewhat high, the actual price being more frequently below than above it.

With 43 rupees as the average of an ordinary year, after providing for the wear and tear of implements, amongst which bullocks may be included, it cannot be said that the ryot has no fund whence to meet any accidents which may contract his working stock. Of course, the occupiers of holdings smaller than the average have not so large a fund; but then they have less stock, although the difference between the two funds would be greater than between the two stocks; for every farmer, except the very poorest, must have a pair of bullocks at least, and some necessary implements, which constitute the bulk of the stock upon a holding of average size. It is in the case of the occupiers of smaller holdings, who have to

keep up a larger stock in proportion to returns than those of larger holdings, that it is so necessary to consider their liability to a sudden diminution of stock, in fixing their rents,—a liability which should reduce the rent to a point lower than it might otherwise be brought to. This done, there would be no pretence for holding that it would be injurious to him to be bound by a lease.

The average profits to the farmer on a candy of cotton of 784 lbs. would be as follows. As the native clean cotton does not exceed 25 per cent of the seed-cotton, it requires 3136 lbs. of the latter to produce 784 lbs. of the former. As the average produce of seed-cotton is 266 lbs. to the acre, it will require 11¾ acres to produce 3136 lbs. of kuppas, or a candy of 784 lbs. of clean cotton. The balance will therefore stand thus:

Outgoings.

	R.	a.	p.
Government rent upon 11¾ acres, at 1 rupee 6 anas per acre	16	2	0
Cost of cultivation, at 2 rupees per acre	23	8	0
Wear and tear of implements	2	8	0
	42	2	0

Returns.

	R.	a.	p.
Yield of 11¾ acres (each acre of kuppas=266lbs. or 9½ maunds, at 9 anas per maund)	63	0	0
Outgoings	42	2	0
Profit	20	14	0

or say, 21 rupees. The government rent is thus equal to 75 per cent of the farmer's average profit. At 63 rupees per candy, the cotton will be worth to the cultivator about 1⅞*d.* per lb. This, however, be it remembered, is not the *lowest* price at which it could be profitably grown in the

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Deccan, but its *average* price, to set off against the average price in America. How far, when prices descended below the average in America, Indian cotton from this district could, *with good roads*, suffer a corresponding fall *without loss to the grower*, will be afterwards considered.

The effects of the new survey in *extending cultivation* it will not be so difficult to point out. And first, as to its working in this respect in some of the districts of the collectorate of Ahmednuggur. From 1818-19, the year of the conquest of the Deccan, to 1841-2, that immediately preceding the introduction of the new survey, the average extent of cultivation in the district of Chandore was 81,000 acres, on which the average collections were about 92,000 rupees, or more than a rupee per acre. In 1842-3, the first year of the new survey, the collections rose to 94,000 rupees, whilst the cultivation mounted up to 109,000 acres, the rate being now less than a rupee an acre. In 1843-44 the latter collections were 99,000 rupees, the cultivation being 121,000 acres. In 1844-45 both collections and cultivation receded a little, the former being still above 95,000 rupees. In 1845-46 they dropped as low as 89,000 rupees, being below the average of the ante-survey period. The cultivation, however, still kept up, being 118,000 acres; but the year being unfavourable, considerable remissions were granted. In 1846-47 the collections again approached the sum of 100,000 rupees, the cultivation having risen to 131,000 acres. This was also a year of remissions, though not to the same extent as the former one. In 1847-48 the collections reached the sum of 105,000 rupees, the cultivation having risen to nearly 140,000 acres. In that year the cultivation was within 10,000 acres of the whole cultivable land in the district appertaining to government, whilst the collections came within 4000 rupees of the maximum survey rental upon the district.

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In the district of Wundindooree, the average collections during the ante-survey period were about 62,000 rupees, on a cultivation of about 52,000 acres. During the subsequent years, down to 1847-48 inclusive, the collections slightly varied, falling in 1844-45 a shade below the former average, but leaving off in 1847-48 at about 67,000 rupees upon a cultivation of 77,000 acres.

The average collections in the district of Sinnur during the ante-survey period were about 114,000 rupees, on an average cultivation of about 103,000 acres. In 1844-45, the year when the new survey was introduced, the cultivation rose to 132,000 acres; but the collections, for reasons similar to those which caused a decline in that year in the other districts mentioned, fell to 83,000 rupees. It was not until 1847-48 that the revenue recovered itself, having reached in that year the sum of 117,000 rupees on a cultivation which had increased to nearly 180,000 acres.

In Nassick and Patoda similar results have been attained. In the former, during the ante-survey period, the average collections were 68,000 rupees on an average cultivation of about 55,000 acres, whereas in 1847-48 the collections were about 69,000 rupees upon a cultivation of upwards of 80,000 acres. In the latter, the average collections before the survey were close upon 110,000 rupees upon a cultivation close upon 130,000 acres. In 1847-48 the cultivation had risen above 200,000 acres, but the revenue to only about 117,000 rupees.

From the foregoing it will be seen that, with the exception of the district of Patoda, the rental averaged, before the survey, more than a rupee per acre, whereas now it averages less in all the districts, and in some considerably less. It will also be seen that the revenue, although it declined a little in the unfavourable year 1844-45, from which decline it took a few years to re-

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cover in some of the districts, completely recovered itself by 1847-48 in all the districts, and not only so, but had slightly advanced. The returns from which I take these figures do not bring the statement down beyond that year. I have adopted round numbers for the sake of distinctness.

The following statement will show the results, both as regards revenue and cultivation, of the new survey in Dharwar, from the years in which it was introduced into the different talooks and parts of talooks of the collectorate to 1850-51 inclusive. For the sake of comparison, it also gives the average cultivation and collections in each case for the period anterior to the introduction of the survey. It will be seen that it is divided into five sections, marked respectively 1, 2, 3, 4, and 5, with a section marked 6, containing an abstract of the whole. The first five sections contain the results of the survey in the portions of the collectorate to which they respectively refer, from the period of its introduction into them. Thus in section 4 we have 345 villages, into which the survey was introduced in 1847-48, so that as regards them the result is given only from that period. In section 5 we have 479 villages, into which it was introduced in 1848-49, which completed the work in the collectorate. For the subsequent three years, therefore, the results given in the abstract have reference to the entire collectorate.

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Statement of Cultivation, Assessment, and Collections in 1175 *Villages of the Dharwar Collectorate, previous and subsequent to the introduction of the revised Survey.* TABLE I.

Nature of Settlement.	Years.	128 villages, into which the new survey settlement was introduced in the years 1843-4 and 1844-5, viz. 80 villages of the Nuwulgoond talook, and 48 villages of the Hooblee talook.				
		Number of villages.	Land in cultivation exclusive of alienations	Assessment of land in cultivation.	Collections on account of land in cultivation.	Collections on account of land of all kinds, waste and alienations included.
			Acres.	Rupees.	Rupees.	Rupees.
Previous to Survey.	Average of years preceding revised assessment.	128	165,068	2,13,840	1,66,410	2,39,967
	Year immediately preceding introduction of revised assessment.	128	144,296	1,94,919	1,55,799	2,26,941
Subsequent to Survey.	1844-5	128	156,896	1,46,192	1,32,637	1,98,931
	1845-6	128	186,807	1,71,453	1,25,056	1,75,467
	1846-7	128	218,647	1,98,817	1,96,695	2,55,373
	1847-8	128	228,669	2,07,406	2,05,590	2,62,552
	1848-9	128	233,088	2,11,558	2,07,554	2,67,893
	1849-50	128	226,812	2,06,571	2,05,202	2,61,763
	1850-1	128	225,240	2,05,335	2,03,172	2,59,154
Settlement of 1850, or last year of revised assessment compared with	Average of years preceding survey exhibits	Increase .	60,172	...	36,762	19,187
		Decrease .	...	8,505	...	...
	Year immediately preceding introduction of revised assessment exhibits	Increase .	80,944	10,416	47,373	32,213
		Decrease .	...	...	...	...

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TABLE II.

Nature of Settlement.	Years.	86 villages, into which the new survey settlement was introduced in the year 1845-6, all the villages being in the Dunbul talook.				
		Number of villages.	Land in cultivation exclusive of alienations.	Assessment of land in cultivation.	Collections on account of land in cultivation.	Collections on account of land of all kinds, waste and alienations included.
			Acres.	Rupees.	Rupees.	Rupees.
Previous to Survey.	Average of years preceding revised assessment.	86	121,173	1,27,649	69,796	1,37,606
	Year immediately preceding introduction of revised assessment.	86	138,291	1,46,960	1,03,435	1,41,336
Subsequent to Survey.	1844-5	...	...	...	...	...
	1845-6	86	1,51,287	95,515	59,273	80,093
	1846-7	86	1,72,588	1,07,625	1,00,091	1,28,484
	1847-8	86	1,74,012	1,08,494	1,01,934	1,29,253
	1848-9	86	1,81,500	1,12,662	1,05,145	1,32,505
	1849-50	86	1,76,497	1,09,055	1,02,457	1,28,291
	1850-1	86	1,78,098	1,09,525	1,02,133	1,27,386
Settlement of 1850, or last year of revised assessment compared with	Average of years preceding survey exhibits	Increase .	56,925	...	32,337	...
		Decrease .	...	18,124	...	10,220
	Year immediately preceding introduction of revised assessment exhibits	Increase .	39,807	...	...	...
		Decrease .	...	37,435	1,302	13,950

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TABLE III.

Nature of Settlement.	Years.	137 villages, into which the new survey settlement was introduced in the year 1846-7, all the villages being in the Bunkapoor talook.				
		Number of villages.	Land in cultivation exclusive of alienations.	Assessment of land in cultivation.	Collections on account of land in cultivation.	Collections on account of land of all kinds, waste and alienations included.
			Acres.	Rupees.	Rupees.	Rupees.
Previous to Survey.	Average of years preceding revised assessment.	137	76,048	1,29,264	88,113	1,38,453
	Year immediately preceding introduction of revised assessment.	137	64,135	1,30,063	81,942	1,36,518
Subsequent to Survey.	1844-5	...	...	...	...	...
	1845-6	...	...	...	...	...
	1846-7	137	78,338	78,335	70,251	1,18,475
	1847-8	137	82,316	79,568	78,973	1,29,774
	1848-9	137	87,311	83,208	82,301	1,35,605
	1849-50	137	89,261	84,100	83,847	1,36,540
	1850-1	137	91,943	85,060	84,771	1,34,279
Settlement of 1850, or last year of revised assessment compared with	Average of years preceding survey exhibits	Increase .	15,895	...	...	...
		Decrease .	...	44,204	3,342	4,174
	Year immediately preceding introduction of revised assessment exhibits	Increase .	27,808	...	2,829	...
		Decrease .	...	45,003	...	2,239

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TABLE IV.

Nature of Settlement.	Years.	345 villages, into which the new survey settlement was introduced in the year 1847-8, viz. 160 villages of the Hangul talook, 130 of Raneebednoor talook, and 55 of Hoobulee talook.				
		Number of villages.	Land in cultivation exclusive of alienations.	Assessment of land in cultivation.	Collections on account of land in cultivation.	Collections on account of land of all kinds, waste and alienations included.
			Acres.	Rupees.	Rupees.	Rupees.
Previous to Survey.	Average of years preceding revised assessment.	345	126,199	2,20,563	1,71,214	2,81,562
	Year immediately preceding introduction of revised assessment.	345	103,729	2,23,468	1,54,140	2,61,805
Subsequent to Survey.	1844-5	...	...	...	...	...
	1845-6	...	...	...	...	...
	1846-7	...	...	...	...	...
	1847-8	345	128,073	1,68,506	1,34,588	2,33,092
	1848-9	345	149,598	1,55,357	1,48,472	2,60,976
	1849-50	345	164,622	1,68,880	1,67,906	2,69,070
	1850-1	345	167,941	1,70,299	1,68,992	2,66,248
Settlement of 1850, or last year of revised assessment compared with	Average of years preceding survey exhibits	Increase .	41,742	...	...	...
		Decrease .	...	50,264	2,222	15,314
	Year immediately preceding introduction of revised assessment exhibits	Increase .	64,212	...	14,852	4,443
		Decrease .	...	53,169	...	...

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TABLE V.

Nature of Settlement.	Years.	479 villages, into which the new survey settlement was introduced in the year 1848-9, viz. 134 villages of the Dharwar talook, 100 villages of the Hoobullee talook, and 245 of the Kode talook.				
		Number of villages.	Land in cultivation exclusive of alienations.	Assessment of land in cultivation	Collections on account of land in cultivation.	Collections on account of land of all kinds, waste and alienations included.
			Acres.	Rupees.	Rupees.	Rupees.
Previous to Survey.	Average of years preceding revised assessment.	479	127,433	2,54,930	2,00,482	3,29,509
	Year immediately preceding introduction of revised assessment.	479	125,111	2,58,545	2,14,043	3,58,440
Subsequent to Survey.	1844-5	...	...	...	...	...
	1845-6	...	...	...	...	...
	1846-7	...	...	...	...	...
	1847-8	...	...	...	...	...
	1848-9	479	153,312	1,74,394	1,74,319	3,07,940
	1849-50	479	197,008	2,20,831	2,19,190	3,47,118
	1850-1	479	205,096	2,25,101	2,22,927	3,51,346
Settlement of 1850, or last year of revised assessment compared with	Average of years preceding survey exhibits	Increase .	77,663	...	22,445	21,837
		Decrease .	...	29,829	...	...
	Year immediately preceding introduction of revised assessment exhibits	Increase .	79,985	...	8,884	...
		Decrease .	...	33,444	...	7,094

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TABLE VI.

Nature of Settlement.	Years.	Abstract. Number of villages.	Land in cultivation exclusive of alienations.	Assessment of land in cultivation.	Collections on account of land in cultivation.	Collections on account of land of all kinds, waste and alienations included.
			Acres.	Rupees.	Rupees.	Rupees.
Previous to Survey.	Average of years preceding revised assessment.	1175	615,921	9,46,246	6,96,015	11,27,097
	Year immediately preceding introduction of revised assessment.	1175	575,562	9,53,955	7,09,359	11,25,040
Subsequent to Survey.	1844-5	...	...	...	...	...
	1845-6	...	...	...	...	...
	1846-7	...	...	...	...	...
	1847-8	...	...	...	...	...
	1848-9	1175	804,809	7,37,179	7,17,791	11,04,919
	1849-50	1175	854,200	7,89,437	7,78,602	11,42,782
	1850-1	1175	868,318	7,95,320	7,81,995	11,38,413
Settlement of 1850, or last year of revised assessment compared with	Average of years preceding survey exhibits	Increase .	252,397	...	85,980	11,316
		Decrease .	...	1,50,926	...	...
	Year immediately preceding introduction of revised assessment exhibits	Increase .	292,756	...	72,636	13,373
		Decrease .	...	1,58,635	...	...

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Remarks.

1. No accounts showing the "assessment of land in cultivation" during the period previous to survey for 47 out of the 128 villages entered in the first division of the statement being at hand, this item has been assumed, by increasing the collections of the villages in question in the same proportion that the assessment exceeded the collections in the other villages of the collectorate.

2. Accounts for the period preceding survey in the case of one of the 345 villages entered in the third division of the statement are not at hand; and in this case the cultivation assessment and collections for the first year of the revised assessment have been assumed to be also those of the preceding period, in order to complete the statement.

3. The number of years included in the average for the period preceding survey is not the same for all the villages entered in the statement, but generally exceeds twenty.

The result in Poona will appear from the following statement, showing the quantity of land in cultivation from 1841-42 to 1850-51 inclusive:

	Acres.
1841-2	982,600
1842-3	Not procurable.
1843-4	1,055,282
1844-5	1,063,127
1845-6	1,102,088
1846-7	1,148,755
1847-8	1,228,304
1848-9	1,227,898
1849-50	1,196,719
1850-1	1,214,735

This shows an increase of nearly 25 per cent in ten years. The realisable revenue in 1841-42 was 787,683 rupees; and in 1850-51, 786,483 rupees. Thus whilst in

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ten years cultivation had advanced about 25 per cent, the revenue remained pretty nearly at the same point, showing a reduction of about 25 per cent upon the general average rates in Poona.

The following abstract of a detailed statement, embracing each talook, will show the progress of cultivation in the collectorate of Sholapoor. I refrain from giving the detailed statement, on account of the space which it would occupy.

Periods.	Years.	No. of Villages.	Government Land.				
			Cultivated		Assessment on Cultivation.	Portion of Assessment collected.	Remaining on account of Remissions and Balances.
			Acres.	Per cent of total arable acres.			
1.	2.	3.	4.	5.	6.	7.	8.
Prior to survey.	1836-37	829	12,07,984	58	847,077	742,310	104,757
	1837-38	829	12,35,175	59	852,946	699,918	153,028
	1838-39	829	13,12,780	62	855,793	711,476	144,317
Subsequent to survey.	1839-40	..	..	..	..	..	..
	1840-41	..	..	..	..	..	..
	1841-42	..	..	..	..	..	..
	1842-43	..	..	..	..	..	..
	1843-44	..	..	..	..	..	..
	1844-45	886	16,07,844	68	770,249	725,457	44,792
	1845-46	894	16,96,476	71	805,390	651,171	154,219
	1846-47	829	17,40,707	78	809,046	804,161	4,885
	1847-48	829	17,67,283	79	821,314	816,810	4,504
	1848-49	829	17,69,425	79	817,992	813,708	4,284
Last year subsequent to survey compared with last year previous to survey shows an	Increase	..	4,56,645	17	..	102,232	..
	Decrease	..	..	..	37,801	..	140,033

For the last three years of the period subsequent to survey, sixty-five villages, for which accounts for the period anterior to the survey could not be obtained complete, are

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omitted, in order to facilitate a comparison of the two periods.

The crops failed extensively in the years 1844-45 and 1845-46, to which cause must be ascribed the large remissions and balances for those years.

From this it will be seen, that between 1838-9, the last year previous to the survey, and 1848-9, the increase in cultivation amounted to about 35 per cent. And whilst the assessment had decreased in the latter, as compared with the former year, by the sum of 37,800 rupees, the actual collections had increased by no less a sum than 102,232 rupees. The diminution between the two periods, in remissions and outstanding balances, exceeds 1,40,000 rupees.

This point, however, would be but imperfectly placed before you, were I to withhold another statement in my possession, respecting Sholapoor, which brings the matter down to the year 1849-50. The statement, which refers to the four years ending that year, will tell its own tale.

If discrepancies appear between this and the former statement, as regards the number of acres in cultivation, and the sums collected during the years 1846-7, 1847-8, and 1848-9, it is because the former refers for these years to only 829 villages, whereas the latter embraces all the surveyed villages of the collectorate, in number 899. The reason for omitting 65 of the remaining 70 villages from the former statement is given in the foot-note appended to it, although none is assigned for the omission of the other five. The additional 70 villages would reconcile the discrepancy as regards *cultivation*. This discrepancy as regards *collections* is, in like manner, due to the omission of these villages; but not wholly so. The entries in columns 6 and 7 of the former statement refer only to the assessment and collections on account of land in *cultivation*, whilst the corresponding columns in the latter

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included the sums realised from the sales of the grazing of the waste, and from other items. These sums, together with the collections on account of the 70 omitted villages, would remove the discrepancy as regards *collections*.

But the important matter to be gleaned from these statements is in connexion with the *progress* of *cultivation*. From the former it will be seen that, during the years 1846-47, 1847-48, and 1848-49, cultivation in the 829 villages which it embraces but slowly increased; the increase in the 899 villages during these years, as seen by the latter statement, having been somewhat greater. But in either case it serves to show that high-water mark had, at least for the time being, been fully or nearly attained. The year 1849-50 shows, in the latter statement, an actual turn of the tide, the cultivation of that year having receded beyond that of 1846-47. Indeed, in most of the Mahratta talooks of the collectorate, we find that the tide had set backwards since that year, the general cultivation having been annually increased a little until 1849-50 by the increase which took place in the four Canarese talooks of Indee, Hypurga, Moodebehal, and Mungolee. Into these the assessment was not introduced until 1844-45. They were almost depopulated when they came into our possession, and are yet but thinly peopled; the large proportion of unoccupied land of a good quality, which they contain, leading to an increase of cultivation in them, whilst it was receding in the neighbouring talooks. But this did not suffice to sustain the general cultivation in 1849-50, when even in these talooks a falling-off was observable. In fact, in that year the tide seemed every where to have reached the turn. For some years after its introduction, under the stimulus given by the new survey, existing occupiers enlarged their holdings; and many, who should never have been occupiers, took up

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holdings from the waste. In this way the tide rolled on, until, at length, the natural result has come to develop itself. Those who enlarged their holdings beyond their means, and who took up holdings without the means of cultivating them, have at last been obliged, in some cases, to curtail or entirely abandon them. More are likely to do the same; but this ebbing of the waters, when it reaches its lowest point, will still show a large and permanent increase of cultivation. But the whole, even of this, will not be exclusively attributable to the new survey; for, particularly in some parts of the southern Mahratta country, a respectable proportion of the increase will be traceable to the recovery, through the instrumentality of the Enam commission, of Enam lands improperly held.

From the statements already given, the results of the new policy, as regards the revenue, may have been gathered. In order, however, to put this point still more clearly before you, I subjoin a few additional statements having exclusive reference to its effects upon the revenue in different parts of the country. The following will illustrate the result so far as Dharwar is concerned.

Land Revenue of the Dharwar Collectorate for Ten Years preceding the commencement of Revenue Survey Settlements, and subsequently up to 1850-51.

Years.	Number of Villages.	Net Land Revenue after deducting Remissions.	Add Remissions granted.	Gross Land Revenue.	Remarks.
1.	2.	3.	4.	5.	6.
		Rupees.	Rupees.	Rupees.	
1833-34	1,142	9,67,948	48,760	10,16,708	
1834-35	1,142	11,02,540	33,008	11,35,548	
1835-36	1,142	9,25,332	1,53,089	10,78,421	
1836-37	1,142	8,35,787			
	1	3,053			
	1,143	8,38,840	1,61,713	10,00,552	

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Land Return of the Dharwar Collectorate—(continued).

Years.	Number of Villages.	Net Land Revenue after deducting Remissions.	Add Remissions granted.	Gross Land Revenue.	Remarks.
1.	2.	3.	4.	5.	6.
		Rupees.	Rupees.	Rupees.	
1837-38	1,142	10,77,561			*The accounts for one village not forthcoming.
	2*	4,706*			
	1,144	10,82,267	31,341	11,13,608	
1838-39	1,142	9,07,890			
	2*	4,517*			
	1,144	9,12,407	1,28,764	10,41,171	
1839-40	1,142	11,29,058			
	15*	34,246*			
	1,157	11,63,304	61,103	12,24,407	
1840-41	1,142	11,28,351			
	17*	34,536			
	1,159	11,62,887	38,644	12,01,530	
1841-42	1,142	11,42,270			
	24*	46,640			
	1,166	11,88,910	82,413	12,71,323	
1842-43	1,142	11,13,385			
	32*	56,166*			
	1,174	11,69,551	71,991	12,41,542	
1843-44	1,142	10,61,686			New settlement introduced in 80 villages.
	32*	52,202*			
	1,174	11,13,888	52,559	11,66,447	
1844-45	1,142	10,04,655			Ditto in 128 villages.
	32*	49,731			
	1,174	10,54,386	44,257	10,98,643	
1845-46	1,142	8,93,198			Ditto in 214 villages.
	32	52,171			
	1,174	9,45,369	1,35,221	10,80,590	
1846-47	1,142	10,37,354			Ditto in 351 villages.
	32	61,282			
	1,174	10,98,636	40,996	11,39,632	

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Land Return of the Dharwar Collectorate—(continued).

Years.	Number of Villages.	Net Land Revenue after deducting Remissions.	Add Remissions granted.	Gross Land Revenue.	Remarks.
1.	2.	3.	4.	5.	6.
		Rupees.	Rupees.	Rupees.	
1847-48	1,142 32	10,35,360 62,919			New settlement introduced in 696 villages.
	1,174	10,98,279	67,349	11,65,628	
1848-49	1,142 37	10,25,925 69,501			During these three years new settlement in operation in all the 1142 villages.
	1,179	10,95,426	21,846	11,16,911	
1849-50	1,142 55	10,78,373 1,07,218			
	1,197	11,85,591	38,438	12,24,029	
1850-51	1,142 62	10,59,734 1,27,039			
	1,204	11,86,778	35,232	12,21,503	
Average from 1833-34 to 1842-43, or for 10 years previous to survey.	The third column of this average refers to 1142 villages.	10,33,012	81,082	11,32,481	
Average from 1848-49 to 1850-51, or for 3 years of revised assessment.	Ditto.	10,54,677	31,838	11,87,481	

From this it will be seen that, since the introduction of the new survey into the whole collectorate, the average revenue has, notwithstanding the reductions which have been made in the rates, slightly exceeded the average of the ten years previous to its introduction, the average of remissions having fallen by at least half a lac of rupees. During 1850-51, the whole gross revenue for the year was collected without the loss of a single pice; an almost unprecedented circumstance in the annals of Indian finance.

In the four districts of Poona the land revenue for the

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eight years previous, and the eight subsequent to the survey, was as given in the next and following pages.

Here we see that, although during the latter period the gross revenue had somewhat decreased, the actual collections had increased by upwards of five lacs of rupees; the remissions had diminished by upwards of three lacs and a half, and the outstanding balances by nearly two lacs. I have the details respecting each district, on which this general result is based; but want of space prevents me from giving them here.

A similar result is shown by the following statement, in p. 360, having reference to three of the talooks of Sholapoor for seven years previous, and seven subsequent to the survey.

Although from this it appears that during the latter period the gross revenue had declined by about a lac and a quarter of rupees, the actual collections had increased by nearly a lac and a half; the remissions having declined upwards of two lacs and a half, and the irrecoverable balances by 14,965 rupees.

To multiply instances would be unnecessary. From the statements above given it will sufficiently appear, that whilst government has lost nothing in the shape of revenue by the adoption of a liberal policy, the ryots have been placed in a far better position for meeting the government demands upon them; that is to say, *their circumstances have improved.*

It is not merely by the reduction of the ordinary land revenue that they profited, for the new survey has, as already seen, abolished all extra cesses upon the land. One of the most burdensome of these was the cess paid by the ryots to the head men of the village. This is now merged into the survey rates, and a money compensation paid from the treasury to the parties formerly entitled to the cess.

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Year.	Settlement of the Year.	Actual collection of Land Tax.	Remission granted.	Balance irrecoverable and struck off.
1.	2.	3.	4.	5.
ABSTRACT.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
INDAPOOR :				
Prior to survey	6,09,433 11 10	3,28,007 5 7	1,31,641 6 1	1,49,785 0 2
Subsequent to survey	6,26,040 7 3	5,75,665 2 0	43,543 0 1	3,776 6 6
Increase subsequent to survey .	16,606 11 5	2,47,657 12 5		
Decrease subsequent to survey .	. . .	. . .	88,098 6 0	1,46,008 9 8
BHEEMTHURRY :				
Prior to survey	5,91,359 9 5	3,97,531 11 1	1,84,793 11 0	8,992 13 11
Subsequent to survey	6,34,610 3 6	5,49,974 0 0	79,455 3 6	161 5 10
Increase subsequent to survey .	43,250 10 1	1,52,442 4 11		
Decrease subsequent to survey .	. . .	. . .	1,05,338 7 6	8,831 8 1

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Pawbul:				
Prior to survey.	6,25,165 1 7	5,10,716 9 2	1,11,299 3 2	1,634 7 9
Subsequent to survey. . . .	5,93,317 0 7	5,73,255 14 10	17,583 0 11	20 0 0
Increase subsequent to survey .	. . .	62,539 5 8		
Decrease subsequent to survey .	31,848 1 0	. . .	93,716 2 3	1,614 7 9
Havaillee:				
Prior to survey.	5,85,586 11 9	4,73,688 4 8	79,130 9 8	25,003 5 9
Subsequent to survey . . .	5,54,425 9 3	5,29,182 4 7	9,372 9 7	28 9 0
Increase subsequent to survey .	. . .	55,493 15 11		
Decrease subsequent to survey .	31,161 2 6	. . .	69,758 0 1	24,974 12 9
Total prior to survey	24.11,545 2 7	17,09,943 14 6	5,06,864 13 11	1,85,415 11 7
Total subsequent to survey . .	24,08,393 4 7	22,28,077 5 5	1,49,953 14 1	3,986 5 4
Total increase subsequent to survey	. . .	5,18,133 6 11		
Total decrease subsequent to survey	3,151 14 0	. . .	3,56,910 15 10	1,81,429 6 3

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Statement showing the Land Revenue of the Mohul, Marah, and Barsee Talooks of the Sholapoor Collectorate from 1832-33 to 1838-39, and from 1840-41 to 1846-47, for Seven Years prior to, and Seven Years subsequent to, the Survey Assessment introduced into them.

YEARS.	Settlement of the Year.			Actual Collection of Land Tax.			Remissions granted.			Balances irrecoverable and struck off.			Remarks.
1.	2.			3.			4.			5.			6.
	R.	A.	P.	R.	A.	P.	R.	A.	P.	R.	A.	P.	
1832-33	2,43,148	4	2	62,155	13	1	1,80,710	8	3	281	14	10	A year of failure and famine.
1833-34	2,87,224	2	2	2,81,582	14	0	. . .			5,571	6	7	
1834-35	2,78,180	3	2	2,62,246	8	5	10,200	0	0	5,625	9	2	
1835-36	2,61,223	8	5	2,15,589	6	1	43,336	5	11	2,253	13	6	
1836-37	2,88,195	6	4	2,70,166	2	2	13,728	8	1	4,277	12	5	
1837-38	2,92,418	6	10	2,56,519	5	3	35,095	4	2	803	13	5	The village of Dharphul was transferred from Sholapoor to Barsee (Rs. 1,071 9).
1838-39	2,93,670	14	2	2,41,126	9	7	52,416	8	8	126	10	2	
Total .	19,44,060	13	3	15,89,386	10	7	3,35,487	8	1	18,941	0	1	

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1840-41	2,54,654 15 8	2,45,303 11 10	9,350 3 10	...	The village of Nurkhesr was transferred from Sholapoor to Mohul (Rs. 2,350 9).
1841-42	2,61,474 9 5	2,59,565 0 1	1,753 9 0	155 15 10	The village of Moorwunchee was transferred from Sholapoor to Mohul (Rs. 752 0 2).
1842-43	2,61,663 10 5	2,60,881 9 3	782 1 0	...	Pootuj was received from late Nipani Jagheer and attached to Mohul (Rs. 2,770).
1843-44	2,57,508 8 6	2,53,657 7 3	3,851 1 3	...	Waddalla was transferred from the Sholapoor to the Barsee district (Rs. 1,670 3).
1844-45	2,53,303 4 1	2,53,265 7 4	...	...	
1845-46	2,61,566 4 8	1,96,260 0 4	61,486 5 4	3,819 15 0	A year of failure of harvest and scarcity.
1846-47	2,70,171 1 3	2,65,145 12 9	2,058 15 2	...	
Total .	18,20,342 6 0	17,34,079 0 10	79,282 3 7	3,975 14 10	
Increase subsequent to survey.	...	1,44,692 6 3			
Decrease subsequent to survey.	1,23,718 7 3	...	2,56,204 15 6	14,965 1 3	

In the unsurveyed districts of the southern Mahratta country a curious tax prevails, payable by some of the owners of alienated lands. The tax is triennial, and was imposed by the late government, but seemingly on no regular scale, varying greatly in proportion to the income of individuals. It is now consolidated, in the surveyed districts, with the annual joodee, or quit rent, payable in respect of such lands. In general, these quit rents have been liberally dealt with; for whilst they have not been increased when found below the survey rates, they have been reduced to the level of these rates whenever they were found in excess of them.

Taking every thing, then, into account, it is no wonder that the new survey should be in no little favour with the ryots. To such of them as are vigorous and enterprising, it has opened up a prospect of independence and accumulation, such as they never enjoyed before. Those who required a stronger incentive to quicken their energies, find that, without any extra exertions, they can now meet their diminished obligations, and enjoy greater comfort than before; whilst those whose indolence required that responsibilities should have been devolved upon, as well as indulgences extended to them, are satisfied at being left in their former condition, in consideration of having to subject themselves to less exertion. It is thus that the survey adapts itself to the tastes and views of all classes of holders, although it would have been much better for the country had its arrangements been such as would have quickened the energies of all classes. It is much to be feared that, under it, the two classes last alluded to, viz. the unenterprising and the indolent, will be found greatly to preponderate.

I have thus, after presenting you with a hurried outline of the old revenue system of the Deccan, with its inequali-

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ties, uncertainties, fluctuations, and excessive exactions, drawn your attention to the new survey, as the proposed remedy for such complicated evils,—a remedy which has already been applied to the greater part of the Deccan, which is gradually embracing it all, and which has now been for some years in operation throughout all the chief cotton districts of this division of the presidency. I have endeavoured to analyse and explain the details of the new measure: how its measurements and valuations are effected; what are the elements which chiefly affect the question of the value of the lands; the terms on which the tenants, whether sole or joint, hold their lands, their powers of transfer, with all the other incidents attached to the new tenancy which has been created. My next care has been to inquire into the merits of the new measure; in doing which, I have first considered the relation in which it places the tenant towards the land. On this I have dwelt as what I conceive to be one of its greatest defects, inasmuch as, after drawing a distinction between tenants of small and tenants of greater means, it adopts *towards both* a principle for which it seeks its justification in the circumstances of only one of them, and compulsorily places all tenants,—those to whom it might be advantageous, and those who might not consider it of advantage to them, to enter into the terms of a lease,—in the same position as regards the land; a position not calculated to draw forth the energies of all classes of cultivators, to attract capital in any great quantity to the land, or to improve the character, however much it may, for a time, extend the area of cultivation. I have also shown that those for whose sakes the principle of annual leases has been universally applied, those of slender means, are, particularly when their means are the slenderest, the *least likely* to avail themselves of the privilege which it is designed to confer.

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My next object has been to inquire into the distribution which the new measure has made of the profits of cultivation, with a view to ascertain what disposition it has made of the proprietary right to the land. I have shown that these profits are now shared between the cultivator and government; but that, as the share of government is fixed and certain for only a limited period, at the end of which it may again absorb all the profits, the proprietary right is not in the holder but solely in the government, as it was before the new survey; an arrangement inimical to the interests of agriculture, as it is not possible that, under such circumstances, the duties of proprietorship can be fulfilled to any adequate extent. I have thus shown that the new measure has not done what it might have done for agriculture, inasmuch as it has left both the great interests connected with the land-proprietor and cultivators in a false position with respect to it. I have then considered the effect which the new measure will have, if it succeed in making occupancies saleable to any extent in the market, of causing cultivation, after partially improving it for a time, to take a *retrograde* movement, by the land falling into the hands of a set of cultivators who will be virtually, if not also nominally, mere tenants from year to year. I have dwelt upon its probable effects on agriculture, with a view to show that, whilst an *improved* is more necessary to the increased growth of cotton in the southern Mahratta country than an *extended* cultivation, the effects of the new survey will be more seen in the shape of an *extended* than of an *improved* cultivation. I have then considered how its working will, in some respects, be counteracted by checks inherent in its own machinery; after which I have pointed out some of the extraneous elements of disturbance with which it will yet come into collision. I have next endeavoured to point out the su-

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periority in all respects of a *permanent* to a *temporary* settlement, provided the permanent settlement be placed upon a proper basis. I have considered the chief objections to such a settlement, and shown the ease with which the present measure could be transformed into it; when a complete but salutary revolution would be wrought in the distribution of land, when capital would be freely attracted to it, and when agriculture would flourish in all its branches, under the co-operation of a numerous interested and competent proprietary, and of a set of cultivators holding their lands on terms calculated alike to draw forth their means and stimulate their best energies to its culture. After this, I have considered the good which the new survey has effected, first, in fixing the rent for a term of years, and next, in reducing at the same time that it has fixed it; in the extent to which the reduction has been effected, and in its results as regards the profits of cultivation generally, and of that of cotton in particular; in extending cultivation, although its effect in that direction seems, for the time being, to have reached its limit; and lastly, in sustaining the revenue;—all which make it cause of regret that a principle so cramped and fettered by details as that which lies at its foundation, should not have been carried further, and delivered from the checks which impede its working. If from the analysis, the examination into the merits, and the exposition of the general effects, of the new system thus given, any suggestions may be made which may lead to its beneficial modification, more particularly ere it spreads over the rest of the Deccan, or is extended, as is designed, to the remainder of the presidency, the foregoing pages will not have been written in vain.

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CHAPTER II.

ROADS.

ROADS INDISPENSABLE — THE GHAUTS — METALLED ROADS — MADE ROADS — FAIR-WEATHER ROADS AND TRACTS — ROADS, POPULATION AND REVENUE — ROADS IN AMERICA, CEYLON, ETC., COMPARED — ROADS IN THE COTTON DISTRICTS.

WHATEVER may be the improvements effected in the landed system of the Deccan ; however earnest and efficient may be the different attempts to place its financial administration on a sounder and more equitable basis ; and whatever may be the reductions effected in the land-revenue, or the reforms introduced into the manner of collecting it,—the object in view will be but very partially accomplished so long as the coast remains, as now, practically inaccessible to great part of the interior. Of what avail will it be—either to government or the cultivators—to stimulate agriculture and multiply agricultural produce, by reducing, equalising, and giving some degree of permanency to the assessment, if, when the immediate end be gained, and produce be multiplied, it remain a drug

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in the hands of the producer, from his inability to find a market for it either at home or abroad? I have already intimated that, without a speedy and liberal expenditure in the construction of roads between the Deccan and the coast, such will be the result of the new survey,—a result in the evil consequences of which government will participate equally with the ryots; for government cannot long continue in the receipt of money-rents, which the glut of produce in the market will disable the ryots from paying. Nay, more: taught by experience, the ryots will, by and by, cease to raise a surplus which they cannot dispose of, when agriculture will relapse into its former state, the revenue be materially and permanently diminished, and all attempts at improving the country and augmenting the wealth and comforts of its people be utterly frustrated. The only hope for the country is, that the land should be made to yield far more regularly and abundantly than hitherto, which cannot be effected, however much the assessment may be reduced, unless additional facilities be afforded for the disposal of its surplus productions. As already observed, it is more to an enlargement of its export trade than to any material augmentation of the home demand, that the Deccan will, at least for some time to come, have to look as the outlet for its extra produce. Whatever else may be done for the extension of the export trade, the improvement of the communications between the interior and the coast cannot be dispensed with. To the construction of good roads, then, the Indian government must now sedulously address itself, as a necessary concomitant to its new financial system. It has, indeed, left itself no alternative; for if it halt now, its work will be but half performed.

In whatever part of the country government may see

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fit to adopt the course which it is now pursuing in the Deccan, relying for success, pecuniary or otherwise, upon a large extension of agricultural operations, the same consequence as regards roads will follow,—that is to say, the same necessity will arise for their immediate construction on an adequate scale. It is not absolutely indispensable that government should itself be, in all cases, the immediate agent in their construction; for there are circumstances under which the people themselves might both make and maintain the roads, provided they were properly organised, and had sufficient means left them for the purpose. But in the Deccan the government must, of necessity, undertake the construction of the great lines of road; not only from the formidable nature of some of the obstacles to be overcome, but also from the consideration that the most formidable of these obstacles occur where population is scantiest and most steeped in poverty.

For how is the Deccan situated? It is an inland district, the portion of it lying south of the latitude of Bombay being at an average distance of 25 miles back from the sea. But this is not all; for although so near the sea, it is separated from it by an obstacle which throws it virtually a hundred miles from it. That obstacle consists of the Ghauts, which, along its entire length, constitutes its western border. This formidable range of hills, stretching, with scarcely a break, from the south bank of the Taptee to Cape Comorin, presents to the Konkan, or low country which intervenes between it and the sea, in some places a broken and tumultuous aspect, its huge, rugged masses, as they descend into the plain, being shrouded in luxuriant vegetation; and in others, the appearance of a continuous naked and perpendicular wall. It is behind this stupendous natural rampart that

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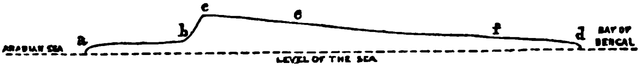
the Deccan is situated, at an average elevation, for at least 100 miles to the eastward, of nearly 2000 feet above the level of the sea. From the crest of the Ghauts the sea is at most points visible to the westward; but to reach it from any part of the Deccan, this mountain barrier must, at some point or other, be overcome. The means of descent are only found at distant intervals, consisting sometimes of perilous and break-neck-looking foot-paths, to which one would think it almost too great a venture for even a goat to trust himself. At other points, bridle-tracks have been formed, down which, by a lengthened and circuitous course, ponies and bullocks may with difficulty be led; whilst at intervals far apart the descent has been made practicable for wheeled vehicles,—although it is only at two points from the Taptee to Coompta, along a line of fully 500 miles, that they can ascend with any thing like ease, or descend with any thing like safety.

To those accustomed to look upon hills as masses of earth and rock, rising *on all sides* from the plain, the precise *rationale* of the Ghauts, and of the country on either side of them, may not at once be sufficiently intelligible. The following diagrams, whilst they may serve to illustrate it, will also show the position of the Deccan with regard to its natural outlets on the coast, to which it is really so near, but from which it is virtually so far distant.

The first that I shall present is a sectional illustration of what may be regarded as the great physical scheme of the larger part of the Indian peninsula: thus



Here we have the Arabian Sea to the west, and the

Bay of Bengal to the east. The low land stretching from the former at *a* eastward to *b*, represents the Konkan, which separates the sea from the hills along the whole line of their course. The upward line from *b* to *c* represents the elevation of the Ghauts; and the long line from *c* to *d*, gradually descending to the Bay of Bengal, the great sloping plain of the Deccan. This line, it will be perceived, is divided into three parts,—the most easterly, that from *f* to *d*, being generally regarded as not appertaining to the Deccan, but as falling within some other division of the country, such as the Circars or the Carnatic, according to its position. The Deccan, in its larger application, embraces the British possessions in Western India above the Ghauts, and the dominions of the Nizam. The line from *c* to *f* will represent the extent to which it stretches eastward from the Ghauts; that from *c* to *e* showing the portion of it which falls within the limits of the British territory. The middle portion, that stretching from *e* to *f*, indicates the position of the great inland state of Hyderabad.

It is not pretended that the lines in this diagram are exhibited in their exact relative proportions,—the elevation of the Ghauts, for instance, being exaggerated, that the illustration, if less correct, may be more striking.

It will be seen at a glance that the crest of the Ghauts at *c* constitutes the great water-shed of the peninsula. By far the greatest portion of water is shed eastward; the streams which flow from the Ghauts to the Bay of Bengal being the longest in their courses, the largest in their volume, and the most imposing in their appearance. Were they navigable for hundreds of miles, like so many of the American rivers, it is evident that along the Coromandel Coast would be found the natural outlets for the produce of the greater portion of the Deccan. But they

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are not navigable; so that, although they are invaluable as regards the purposes of irrigation, they are useless for the distribution of produce. It is this which makes so large a part of the Western Deccan look to the Arabian Sea as its outlet, notwithstanding the formidable obstacle which intervenes between them; for that obstacle can be more cheaply and expeditiously overcome than the long land carriage, by means of which alone produce from the west could be transferred to the Bay of Bengal. In addition to this, the western coast is plentifully supplied with harbours, whilst the eastern sea-board is almost entirely destitute of them. In seeking its outlets by the Arabian Sea, the foregoing diagram illustrates the obstacle to be overcome by the Western Deccan, including the British possessions above the Ghauts, and a large portion of the dominions of the Nizam. Let it come from what district it may, and seek what port it pleases, the produce of the Deccan must, at some point or other, make the plunge from the high to the low country, a plunge averaging 2000 feet; and for accomplishing which the most inadequate means have as yet been provided, except at two points, as heretofore noticed.

But this is not all. It is seldom that this outline which lies at the basis of the physical conformation of the country, is exhibited without some local diversity. It is rare, for instance, to find the summit-level of the Ghauts coinciding with that of the Deccan, as assumed in the foregoing diagram. Throughout most of their course the mountains spring up from the Konkan to an elevation greater than that of the Deccan, thus overlooking the country on both sides of them, though of course from a much loftier altitude on the Konkan than on the Deccan side. In addition, therefore, to the great step downwards already pointed out, the Deccan is, at most points, further separated from the

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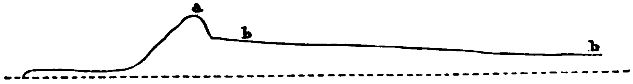
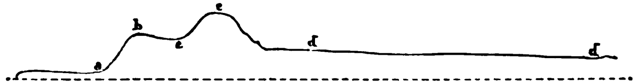
Konkan by the mountain-wall which, rising above it, screens it from both the low country and the sea. The following, also a sectional diagram, will illustrate this:



Here the ghaut rises at *a* considerably above the level of the Deccan *b b*. In such case, to gain the Konkan from the Deccan, the mountain, unless it is flanked by a practicable pass, at no great distance either to the north or south, must be scaled from the Deccan side, after which the descent, greatly enhanced by the previous ascent, must be made into the low country.

In some places the diversity presents itself in the form of a double line of ghauts, one rising from the other, thus:



It is thus, for instance, at Mahableshwur. Here *d d* represents the level of the Deccan, to gain the Konkan and the sea from which the upper ghaut must first be scaled on its eastern side to *c*, from which it must be descended on its western side to *e*, from which, again, to *b* a comparatively slight ascent has to be made of the lower ghaut, which has lastly to be descended to *a*, the level of the Konkan. This is actually the course which must be adopted in gaining the sea, by Mahableshwur, from Sattara. For the first twenty-five miles or so the road proceeds along the upper part of the valley of the Yena, one of the earliest tributaries of the Krishna, the valley which is at the summit-level of the great plain of the Deccan

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being flanked on either side by the lofty lateral spurs of the Ghauts. At the head of the valley we are about 2000 feet above the Konkan, between us and which, however, two formidable ghauts, as represented above, intervene. Our first business is to scale the higher ghaut, which we ascend to the cool retreat of Mahableshwur, at an elevation of nearly 3000 feet above, not the Konkan, but the Deccan. We are now, instead of *two*, about *five* thousand feet above the level of the sea, to gain which we have to descend two precipitous ghauts, up or down which no wheeled vehicle can venture with safety.

The foregoing may serve to convey some idea to the mind of the peculiar nature of the mountain rampart behind which the Deccan is situated, and which it must, in some manner or other, overcome, before it can reach its outlets on the coast. But I have hitherto dealt with only the great western range of ghauts, whose course is almost due north and south. There are, however, other features of the mountain district, subordinate to this, the great one, which have a material bearing upon the question of road-making in the Deccan. I now allude to the great lateral spurs of the ghauts, which they throw eastward far into the interior; and to the detached mountain masses, which, where the lateral chains are not continuous, are found so profusely scattered over the elevated plain.

The diagram on next page, without aiming at correctness of delineation, simply presents you with a general idea of the main plan of the Deccan, viewing it *superficially*, as it is found between Poona and Dharwar.

This will suffice to indicate the general surface-plan of the country between the two points mentioned. The spurs strike eastward from the parent chain, either in lofty and continuous ridges or in detached masses, the streams which descend from them and from the eastern slopes of

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the great line of ghauts flowing easterly through the intervening valleys for many miles of their course, to fall,

one after the other, into the Krishna. Some of the lateral ranges, such as the great Mahadeo range, proceed for about 100 miles into the interior. Many, however, dip into the plain after much shorter courses; and before the Nizam's frontier is reached, almost all traces of them have vanished. To the north of Kolapore the hills are much more lofty, whilst the country is more rugged than between that place and Dharwar, where the spurs are discernible far in the interior, in the form of gentle undulations as compared with the frowning masses in which they exhibit themselves to the northward.

It is obvious that, in a country so circumstanced, the lines of road which would entail the greatest difficulty and cost in their construction would be such as pursued a north and south direction. A road running, say from Dharwar, viâ Belgaum, Kolapore, and Sattara, to Poona, would, on the average, be met by some formidable obstacle or other at almost every five miles of its course. It would have to surmount all the lateral ranges of hills between the two points, as well as to cross all the streams which irrigate the valleys enclosed by these ranges. In the first place, going southward, there are between Poona

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and Sattara, a distance of about seventy miles, two formidable ranges to be overcome; and no less than nine streams, the Krishna being one of them, to be crossed. Immediately beyond Sattara there is another range to be surmounted, between which and Kolapore there are two khinds or passes to be overcome—these khinds being, in in fact, ghauts of a comparatively easy and practicable character. In addition to these, there are between Sattara and Kolapore, also about seventy miles apart, eight streams to be crossed. Between Kolapore and Belgaum there is one rather formidable khind a few miles beyond Neepanee, and another, less so, near the Gutpurba river, about fifteen miles from Belgaum. This portion of a road taking such a direction would be crossed by seven streams in a course of sixty miles. Between Belgaum and Dharwar, which are about fifty miles apart, there are two comparatively low ranges to get over, and two streams to cross. In this list of impediments I do not include several minor streams, which, however, must, like the larger ones, be properly bridged ere a road traversing them can be said to be perfect. Nor do I include those gentle gradients, arising from mere undulations of surface, which must occur in any road of any length in any country. My list includes only the larger streams, and the more formidable inequalities of surface. Some of the streams included are the merest rills during the hot season, swelling, however, into impetuous torrents during the rains. Others, such as the Nera, the Krishna, the Coina, and the Warna, are streams of respectable proportions all the year round. The task of bridging all these streams effectually would be one of no little difficulty, at the same time that it would be one of very considerable expense; for they would all have to be bridged with a view to their current and volume, not during the *dry weather* but during the *rains*.

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As regards some of them, bridging would be indispensable to make the road at all practicable during the dry as well as during the wet season, the almost deserted channels of the smaller streams being practicable without bridges during the dry season. But they are, in most cases, *no more than practicable*, the difficulty of descending and ascending their steep banks being sometimes very great. Thus, it would be necessary that, in all cases, the streams should be bridged, to make the transit by such a road easy not only during the monsoon, but also throughout the year. Along the line of road in question, about forty bridges would be required, all of them of respectable size, and eight of them, at least, of dimensions greater than those of the bridge over the Thames at Kew.

A glance at the map will suffice to show that the roads most calculated to be really serviceable to the Deccan, in a commercial point of view, would be such as pursued an *east* and *west course*. The object being to gain the sea, the shortest practicable routes should obviously be adopted by which that object could be effected. Whilst the shortest routes would be those proceeding as nearly as possible due west from the different points of the interior, they would also be the most practicable in every point of view. The course of the road in each case, instead of being across the numerous streams which descend from the ghauts, and over the formidable lateral ridges which they throw out to the eastward, would, from the moment it reached the mountain country, be up one of the many valleys which intersect the districts, generally in an east and west direction (that of the road), until the main line of ghauts was reached, which might be descended at once to the Konkan and the sea. Here the only real difficulty to be contended with would be the descent of the main line of ghauts. No steep ridges would have to be climbed before reaching the

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main line, nor, particularly in the southern Mahratta country, would river after river have to be crossed; for the roads, in proceeding westward, would, after crossing the Krishna, as they would have to do in the district to the north of Kolapore, follow the banks of its tributary rivers to their sources instead of crossing them. Such roads would be most serviceable to the whole of that portion of the Deccan which lies south of the Nera and between the ghauts and the Nizam's frontier, as well as to a considerable strip of country beyond the line; the whole presenting a region of vast and varied capabilities, with every diversity of soil and every variety of cultivation. The superiority of east and west roads over those running north and south is apparent, even had the latter no peculiar difficulties to contend with before reaching the main line of ghauts. By the one system of roads the sea would be gained after a comparatively short land carriage; whereas by the other the land carriage would be greatly lengthened ere the sea were reached.

Such being the position of the Deccan, and such its wants in respect to roads, it would be but natural to suppose that, in expending money upon their construction, its requirements in this respect would have been attended to. How far they have been so, we shall presently see.

It is not my purpose to show that there are no made roads in the Deccan; for, as regards these great appliances of civilisation and progress, the Deccan affords, as I have heretofore intimated, a contrast to the *utterly neglected* state of Guzerat. But it is possible to spoil a good thing by a faulty execution. Roads have been made in the Deccan, and considerable sums expended in their construction; but to what purpose? They have been projected, planned, and executed with a view to other objects than the development of the resources of the country, so

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that it is rare to find them affording the slightest facilities to commerce. So much is this the case, that I may here repeat what I have already stated, to the effect, that for all commercial purposes, the business of road-making has yet to be begun even in the Deccan.

In proof of this, I shall proceed at once to inquire into what has been really done in the way of road-making in the Deccan. In doing so, let me refer you to No. 1 of the maps appended to this report. It was prepared for me in the general department of the Bombay government, so that it may be taken as exhibiting as favourable a picture as possible for government.

I am now dealing with that portion of the country which lies between the latitude of Bombay and the frontier of the Madras presidency.

The roads, as laid down upon this map, divide themselves into six classes, viz. metalled, made, cleared, post-office tracks, under construction, or sanctioned and proposed. In forming an estimate of the quantity of road actually available, it is obvious that account can only be taken of the first two classes, viz. the *metalled* and the *made* roads, both of which might be included under the term *made* roads; all the rest being yet *unmade*, and therefore *no roads at all*, in the proper acceptation of the term.

The road which first arrests attention is indicated by the black line running from Panwell, opposite Bombay, in a south-easterly direction, to Poona, above the ghauts. This is the celebrated Poona road, the *chef d'œuvre*, in this respect, of the Bombay government. In making this road, which is well metalled throughout, government proved two things: the first, that it could make a good road if it pleased; and the second, that the monsoon is by no means so destructive to good roads in Western India as it is assumed to be, when it is convenient to furbish up an

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excuse for the want of good roads in a particular district. The Poona road, for about half its course, runs through one of the wettest districts of Western India, the quantity of rain which falls during the monsoon, between Panwell and the ghaut, and for about twelve miles to the eastward of Kundalla, at the top of the Bhore ghaut, being about 50 per cent more than the average annual fall at Bombay, and about four times as much as the average of Guzerat. The road has many long, and some tolerably steep slopes, particularly in its Konkan section, down which the superfluous surface-water would rush with destructive volume, but for a simple contrivance which breaks its force and renders it comparatively innocuous. At distances of about 100 feet apart, small embankments are formed, about a foot wide, and only from three to four inches high, so as to offer as little impediment as possible to traffic. These run obliquely across the road, and are formed by merely loosening the stones and earth constituting it with a pick-axe. Their object is to divert the surface-water, before it attains force or volume, into one of the side-ditches, which they very effectually do when they are properly watched, so as to repair the breaches made in them by the wheels of the vehicles passing to and fro. When they are thus kept in proper order, no more water can rush down any portion of the slope than falls between two of the little embankments. When but little rain falls, the intermediate spaces are kept comparatively dry and firm; for the small quantity of surface-water which has then to be disposed of percolates quietly into the ditch, through the loose stones and earth of which the embankments are formed. As the monsoon breaks up, and the weather becomes more settled, the embankments are allowed to subside again to the ordinary level of the road, which they soon do from the pressure of the traffic upon them; and

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it is thus that the road escapes, with comparatively little damage, the perils of the rainy season. If I have been somewhat particular in describing this, it is because I design it as an answer, once for all, to one of the many shallow excuses alleged for the want of good roads in a particular district. The monsoon cannot be so destructive of efforts at road-making in districts where its violence is comparatively small, seeing that the Poona road is annually preserved, with but little damage, from its ravages, although it traverses, for a great part of its way, an undulating country where the monsoon is particularly violent, and lies for many miles of its course under the very shadow of the ghauts.

The Poona road is well bridged, but not thoroughly so, there being several places in the Konkan where, during the rains, it is crossed by streams which have to be forded, the road in such places being strongly causewayed, to prevent it from being washed away. The great obstacle to traffic upon it is the Bhore ghaut, about thirty miles from Panwell. Here the ascent is made from the low to the high land, an elevation of 2000 feet being gained by a winding, zigzag, and frequently precipitous course of about four miles in length. This is one of the two points at which only, as already said, the ghauts can be ascended or descended by wheeled vehicles with any thing like safety along a course of about 500 miles. Yet so difficult of ascent or descent is this, which is generally regarded as one of the best-constructed and most practicable of all the ghauts, that no one ever thinks of driving up or down it in a carriage. Passengers travelling by the public conveyances are carried up and down in palankeens, there being different sets of coaches for the high and low portions of the road. Private carriages are pulled up or let down by numerous bodies of coolies, or they are

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carried up and down, swung from a number of poles which rest on the men's shoulders. They have been pulled up empty by horses, but it is generally considered a good day's work for the animals. Indeed, a man who has any regard for his horse will not even ride him up or down the ghaut, preferring to have him led, and betaking himself either to a pony or a palankeen. Such is the celebrated Bhore ghaut, occurring about midway in the course of the finest road in Western India, and along which so large a traffic to and fro takes place. As the strength of a chain is the strength of its weakest part, so the goodness or badness of a road is, for all practical purposes, to be estimated by the goodness or badness of its worst part. Thus the Poona road is available for heavy thorough traffic just to the extent, and no more, to which the Bhore ghaut is so. The proportion of power to resistance, to be applied in the transport of goods, must be gauged for the whole road by the difficulties of this part of it. The consequence is, that we generally find the animal power employed enormously disproportioned to the load, as compared with the proportions in which they are found on a good ordinary road; and this too where fodder for cattle is so difficult to be obtained as it is in Western India, during the eight months of the year when almost the entire traffic of the country takes place. We are sometimes informed, as a matter of boast here, that the Bhore ghaut was constructed in three months; but how much better would it have been, in every respect, had three times three months been given, and a larger expenditure applied to it, in order to have made it more practicable, and in every way better adapted to the multifarious purposes of a great thoroughfare.

Such would, doubtless, have been the case had the Poona road been constructed with a view chiefly to com-

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mercial objects. But, in connexion with its first efforts at road-making, such could scarcely have been expected from a government which has hitherto rested upon a purely military basis. The prime consideration in undertaking the Poona road was a military one—its two termini constituting the head-quarters of two divisions of the Bombay army. This being so, the ghaut may be well enough adapted for the march of troops and the occasional transport of artillery and the munitions of war. In addition to this, Poona is, for at least four months in the year, the seat of government, and the head-quarters of the Commander-in-chief of the Bombay army and his staff. The Governor's official residence is about four miles from Poona. All public business is supposed to be transacted in "Bombay Castle;" although, between Poona and Mahableshwur, government is absent from Bombay for at least eight months in the year. Had commercial objects been contemplated, there were numerous other lines of road which might have been constructed at the same cost, with far more advantage to the country. Government now points, with seeming exultation, to the traffic on the Poona road, as something which it foresaw, and for which it was its main object to make provision. But this is mere pretence. Commercial objects were not in the foreground when the Poona road was projected and executed; and if a great traffic has since sprung up along it, there are none more surprised at this result than government itself. In the Konkan the road traverses a rich rice country; but its chief traffic is derived from above the Ghauts, and is principally owing to the traffic of districts *beyond it* being forcibly diverted upon it from their having no other means of easy communication with the coast. The country actually traversed by the upper portion of the road from the ghaut to Poona presents, generally speaking, but a

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poor, thin, light, scrubby soil, which of itself could sustain no great traffic. Government has thus, by the commercial success of the road, gained, free of cost, the military object which it had in view in constructing it, and for which it was willing to submit to a sacrifice. Yet, with this unexpected proof before it of the quickening effects of good roads upon a country of great but half-dormant resources, it has still to be urged as much as ever to commit itself to a liberal system of internal improvements, being seemingly resolved to take no step in that direction into which it is not coerced or bullied.

I must here add a few words respecting the Panwell terminus of the road. Panwell is about 24 miles from Bombay, being situated on the continental side of the harbour, and about seven miles up the Panwell river. It is only during high spring-tides that this river is really navigable up to the pier which commences the road. The delays and difficulties which thus occur in the transport of goods may be imagined. Passengers also suffer from this imperfect commencement to a great undertaking; the expense of a journey from Bombay to Poona, which is under 100 miles, being, all things included, very nearly 6*l*. sterling. After nearly 20 years' grumbling and complaint on the part of the public, there is some talk now of a native contractor having been allowed to engage to carry the road down towards the mouth of the river, where there will always be sufficient depth of water.

As with the Poona road commenced my account of the metalled or *real* roads of Western India, so with the Poona road it terminates; for, with the exception of the short lines of such road in the islands of Salsette and Bombay, and that heretofore alluded to as uniting Surat with its watering-place, Doomus (a road of no commercial importance whatever), there is not another specimen of a

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metalled road to be found in the whole presidency — from Ahmedabad to Mysore — a region stretching over eight degrees of latitude, or about 550 statute miles, being equal to about the entire length of Great Britain. The Deccan is often contrasted with Guzerat, as abounding in materials for good roads; yet here, where the materials are confessedly abundant, this is all, in the shape of a perfect road, of which the Bombay government can boast.

I now come to consider what are called the *made* roads of the presidency, in contradistinction to *metalled* roads.

The first that solicits attention leads, almost at a right angle, to the Poona road, in a north-easterly direction from Poona to Ahmednuggur,—the distance between the two being about 70 miles, or about the same as from Poona to Panwell. This differs from the Poona road simply in not being metalled. It is bridged and tolerably well ditched; the surface being covered, not with broken stone, but in some places with loose round stones or coarse gravel, and in others with small fragments of indurated clay. Occasionally the gravel and the clay is found combined, and there the road is generally in the best condition. During the dry season it is practicable enough, and can be driven over without difficulty; but during the rains it is but indifferent throughout, and at many points positively bad. It was also designed, to all intents and purposes, as a military road, Ahmednuggur being the head-quarters of the Bombay Artillery. It has, however, like the Poona road, proved itself of some advantage to commerce. Although it traverses a comparatively poor country, it is, in fact, the chief feeder of the Poona road. With its continuation through the Nizam's territory to Arrungabad, it draws down to Poona much of the traffic of Berar out of what would be its natural course, were proper communications opened up between that important

valley and the coast. To gain this circuitous line of made road, much of that traffic is diverted southward at Ajunta, from which it can only reach Bombay by the *made* road, which it thus seeks by traversing nearly three-quarters of the circumference of an enormous circle.

The next of the *made* roads in order is that leading northward from Poona towards Jooneer. It is obviously one of almost exclusively military importance, and is designed either to proceed by the Alleh Pass, across several streams and over several spurs of the Ghauts, to the Sinnur road, at Sinnur, leading to Nassick, with a view to uniting Poona with Malligaum, the great military station of Candeish; or to take the more direct route from the pass to Malligaum, avoiding Nassick, and flanking the spurs of the hills.

We have another road leading from Poona in a south-easterly direction towards Sholapore. It is already completed to Indapoor, a little more than half-way, and steps are being taken to finish the remaining portion of it. Of all the roads converging on Poona, it is that which is most in the direct line of the metalled road between Poona and Bombay; so that traffic directed by it upon the Poona road, with a view to reaching Bombay, can scarcely be said, so far at least as the district between Poona and Indapoor is concerned, to be taken out of its course, as it must be, from other districts, by any of the other roads leading through Poona. It is by no means as perfect a road as that leading to Ahmednuggur, even the Poona end of it being little more than passable for a carriage after a little rain has fallen. It traverses a very practicable line of country, lying, for nearly its whole course to Indapoor, along the right bank of the Bheema. If the traffic is not very great upon it, it is because to this point the country is poor. At Indapoor the road crosses, or rather will cross,

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the Bheema, and proceed, through a richer country, almost in a straight line to Sholapore. But by the time Sholapore and its neighbourhood are reached, it is, for commercial purposes, worth while seeking a shorter route to the sea than that offered by the Poona road. A direct road westward to Sattara by Punderpoor, and from Sattara by the Wurnuda, the Wusowta, or the Koomhalla ghaut to Mhar, Khair, or Chiploon, would save from seventy to eighty miles of land-carriage between Sholapore and the coast. Such a road, too, would lead, for almost its entire length, through a rich country; and would be infinitely more serviceable to the fertile district stretching for about fifty miles around Sholapore, with the exception perhaps of the part of it which lies in the immediate direction of Indapoor, than the Poona road can possibly be. A *railway*, taking a circuitous course from Sholapore to Bombay, might offer other advantages, which would more than compensate for the additional length of land carriage; but between two roads of the same description, the difference is certainly in favour of that which is the *shorter by a third*, especially when the shorter traverses the richer country, and entails a sea-voyage scarcely more expensive, though a little longer, than that in which its rival terminates. But commercial objects were not uppermost in the thoughts of government in constructing the Poona and Sholapore road. Sholapore is the head-quarters of a brigade,—indeed of the only brigade stationed south of Ahmednuggur, on the Nizam's frontier. It was to unite it with the chief military station of the Deccan, that this road was undertaken in preference to many others which would have been more serviceable to the general interests of the country.

Another road diverging from Poona leads southward to Sattara. It is about seventy-six miles in length, and

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presents, perhaps, the best specimen of what are called *made* roads in the Deccan. It is not yet bridged throughout; and indeed, until within the last month or so, the only completed bridges to be found upon it were built by native princes. This road surmounts two ghauts; one of them, the Babdeo ghaut, about eight miles south of Poona, being about the worst specimen of a ghaut to be found in Western India. Its angles and gradients are frightful to contemplate, its sharp turns being in some places flanked by low walls which afford but a slight bulwark against the precipices which they crown. The road in the steepest parts is constantly in a rough state, being covered to some depth with loose round stones. This serves to check, to some extent, the impetus of a descending load; but how greatly must it increase the drag upwards! On surmounting this ghaut, the road enters upon a broad plain, bounded on the south by the Salpa range, and watered by many streams. The first stream met with is at the village of Hewra, past which it brawls over a somewhat wide and rocky channel. It is unbridged. The next is beyond Sassoor, a narrower but deeper stream, with an impetuous current during the rains. It is also unbridged. There is no other stream of consequence until the Nera is reached, one of the largest tributaries of the Bheema. .Nera bridge is a well-known point on the road; the bridge, which is a long wooden one, resting on stone piers springing to some height from the rocky channel of the river, being of some antiquity, having been built, as I was given to understand, by the Peishwa. Proceeding across the plain, two other streams are encountered, over each of which a stone bridge of one arch had been thrown, the approaches to which were not quite finished when I passed along the road. A little further on, and at the foot of the Salpa range, is another shallow

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stream, which is unbridged. Next comes the Salpa ghaut, a much more practicable one than that just described. Once over it, the road abuts upon the plain of Sattara, which is studded with detached masses of the ghauts. After descending the Salpa range, I crossed a stream, over which a wooden bridge on stone piers was being erected. The next river was the Krishna, after which came its tributary the Yena, between which and Sattara the road encounters no further obstacle. The two last-mentioned rivers are spanned by superb stone bridges, built by the two last rajahs of Sattara: having been begun by the deposed rajah, whose name has, for the last ten years, figured almost weekly on the notice-paper of the House of Commons; and finished by his brother the late rajah, who, it is said, died without heirs.

Before proceeding southward from Sattara, it may be as well to bring up the *other line of road*, which, lying between that just described and the sea, unites Bombay with Sattara by the Konkan and Mahableshwur. This road commences at Nagotna, a small port to the south of Bombay, and several miles up the Nagotna river, and runs thence southward by Indapoor (Konkan) to Mhar and Keneshwar, at the foot of the Mahableshwur ghaut. To a portion of the limited district lying to the northward of Mhar, this road may be of some use, as the means of getting produce to Bombay; but to the district around Mhar, and between it and the ghauts, the lower part of the road is of very little use, Mhar being a much better and a much more accessible port than Nagotna. A little beyond Keneshwar, you begin the ascent of the double ghaut to Mahableshwur, by a road which it is almost impossible to describe, but which is familiar to the people of Bombay as the *Corkscrew ghaut*. When you reach Mahableshwur, you at once perceive the object in constructing

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this road, which was neither military nor commercial, but solely to facilitate access to an agreeable and cool retreat during the hot weather. At Mahableshwur you are nearly 5000 feet above the Konkan, and nearly 3000 above the Deccan. To reach Sattara, therefore, which is about thirty miles inland, you have to descend by a more practicable, but still a difficult ghaut, to the valley of the Yena, along which a good made road leads you to the former capital of the Mahrattas. Between Sattara and Mahableshwur, a distance of thirty miles, the road is partly bridged; between Mahableshwur and Nagotna, a distance of seventy miles, it is not bridged at all, the streams which intersect this latter part being impassable during the rains. Had this been any inconvenience to the Europeans using the road, it would have been obviated long ago. But it is not so; as they only resort to their cool and fashionable retreat during the hot months preceding and subsequent to the rains, when the streams are, many of them, dry, and the rest of them easily fordable.

The made road is continued for about four miles to the southward of Sattara, where it terminates, after emerging, by means of an expensive cutting, through a pass in the chain of hills which lies to the south of the town. Between this and the Warna, which separates the territory of Sattara from that of Kolapoor, a distance of between fifty and sixty miles, there is no trace of a made road to be seen. The country track which you pursue alternately ploughs its way through the deep black mould, and traverses the more consistent red soil. In the wet season it is impracticable for vehicles, being barely practicable for them during the dry. It crosses many streams, none of which, of course, are bridged. In the hot weather most of them are fordable; but during the rains, such as are not so are crossed either in large baskets made of open bam-

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boo-work covered with hides, or by means of sugar-pans or boats. Three of them, the Coina, the Warna, and the Paunchgaum, are ferried by boats. Over such as are provided with neither baskets, sugar-pans, nor boats, you must find your way as you best can. More than once I had, in such cases, to be carried bodily across on men's shoulders.

On crossing the Warna and entering Kolapoor, things wear a better aspect. We once more come upon a made road, though of a grade much inferior to those technically called *made roads*. Between the Warna and the town of Kolapoor the ground was favourable for making a little expense go a great way; for most of the way a stratum of soft red rock comes close to the surface, being covered with a thin turf. The road had only to be lined out and slightly ditched on either side, when, by the removal of the turf, and the exposure of the soft rock, a very good track was obtained. This track is rendered more practicable by the gradual disintegration of the rock, which makes it softer for the feet of cattle. Its cost did not exceed on the average 200 rupees, or 20*l.* per mile. A similar track proceeds southward from Kolapoor by Kagul to Neepanee, crossing two streams between the two last-mentioned places. The road marked as a made road from Kolapoor to the Phonda ghaut can hardly be classed with roads like those leading to Sattara and Ahmednuggur.

From Neepanee to Belgaum, the road was, until recently, of the same character as that between Kolapoor and the Warna. You will see, however, that it is indicated on the map as a road *under construction*, and to be brought up to the standard of a second-class or *made* road. When I passed over it, the last 16 miles of it, between Belgaum and the Gutpurba, were finished; the portion

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between the Gutpurba and Neepanee, about 24 miles in length, being but partly so.

At Belgaum we come in contact with a new cluster of made roads. The first deserving attention is that which leads from the port of Vingorla up the Ram ghaut to Belgaum. It is classed amongst the made roads, but is in every respect inferior to those so designated in the northern Deccan. In addition to this, it is rendered almost useless for the purposes of commercial traffic by the impracticable nature of the ghaut, which is almost, though perhaps not quite so bad as that at Mahableshwur. To get a load of very moderate dimensions up the Ram ghaut is a day's work, requiring an enormous expenditure of animal power. To get one down in safety is a relief which none can thoroughly appreciate without experiencing it. Belgaum is the head-quarters of the southern division of the Bombay army; and this road connects it with the nearest port on the coast, whence the communication is by sea with Bombay.

The made road from Vingorla to Belgaum is represented on the map as continued eastward to Kulladghee, a distance of 74 miles. But this road, which is laid down as being on a par with the Sattara and Ahmednuggur roads, deserves the name of a *made road* for only the first 18 miles from Belgaum. The rest is little, if any, better than an ordinary fair-weather road, although 80,000 rupees are said to have been expended upon it. How the money has gone it is difficult to say; but all that there is to show for it is 18 miles of tolerably made road from Belgaum to Nessurghee, and three travellers' bungalows; one at Nessurghee, another at Yerguttee, and a third at Paunchgaum. The Kulladghee road is continued for about 12 miles to Bugulkote; and both are laid down as if they were equally good. Yet the short road to Bugulkote is a

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perfect contrast to at least three-fourths of that between Kulladghee and Belgaum. The Bugulkote road was undertaken some years ago, to alleviate the pressure of a famine in the neighbourhood, and was certainly made a good work. I was struck with it the moment I came upon it; for it bulged like a half-buried cylinder from the ground, so well rounded that the rain was immediately shed from it, and so smooth and hard, that the wheels scarcely left their track upon it. Yet such is the road put in the same category with the Kulladghee road in the map. The Kulladghee road is unbridged throughout.

The next road, that from Belgaum to Dharwar, is another first-rate specimen of a second-class or made road. It is continued southward to Hooblee and the Madras frontier, whence it is continued as the well known Coompta road. Between Dharwar and Belgaum it is unbridged; as is indeed the whole line of road from Dharwar to Sattara, a distance of about 180 miles, and intersected by about 30 streams. The interruption which this is calculated to offer to traffic may be conceived. Fortunately, to the north of Belgaum there is but little traffic along the line to be interrupted; but the road from Dharwar to Belgaum is one of considerable traffic, and promises to be much more so when a more practicable ghaut is made between the latter place and the coast. The chief obstacle on this road is the Malpurba river, which sometimes swells to a great height, but might be easily bridged. Indeed, I was given to understand that some natives had offered to undertake the bridging of it on certain conditions, but that no arrangement had yet been come to on the subject. This offer, according to the rate at which things progress in India, will require meditation and reference for a quarter of a century at least. During the rains it is only at intervals that carts can pass the river. When I crossed

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it, it had just become practicable, after having been impassable for a fortnight. There were dozens of carts on either side waiting to cross, with a multitude of people connected with them, some of whom had been bivouacked on the banks of the river for several days. Each cart had two bullocks; but they require, each in succession, when loaded, four, and sometimes even six, to drag them through the stream. The noise in crossing was prodigious; for there were generally about a dozen men, nearly up to the shoulders in water, about each cart, helping to turn the wheels, and urging the frightened bullocks along. The height of the wheels prevented as much damage from being done as would otherwise have taken place; but notwithstanding this, the grain, with which the carts were chiefly loaded, was in some cases considerably damaged by the water. Such is an instance of the perils which traffic has to encounter even on one of the best specimens of a made road in the Deccan.

It will be perceived that the made roads thus described divide themselves into two distinct military systems, one of which may be called the Poona, and the other the Belgaum system; each has its main or trunk line commencing on the coast, the one at Bombay and the other at Vingorla,—these trunk-lines uniting these two ports with the head-quarters of two of the military divisions of the presidency. From Poona, the northern system branches off into four roads, either terminating in or leading towards military stations. From Belgaum, the southern system branches off into three roads, all terminating in military stations; Belgaum, Kolapoor, Kulladghee, and Dharwar being the four military centres of the Southern Deccan. We have already seen that the advantages conferred upon trade by the former system are by no means commensurate with its pretensions or extent, the chief traffic

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which it witnesses being the result of a forced diversion from the natural line of traffic for the great and fertile valley of Berar. This, instead of showing that proper facilities have been provided for traffic, only serves to prove the great destitution in this respect to which large and important agricultural and trading districts, which are most in need of good roads, are still subjected. The southern system is certainly more calculated to be of benefit to trade; but that such was not the object in planning or constructing it is evident from the fact, that for the same cost, roads more serviceable in a commercial sense might have been constructed in the same neighbourhood. Had the object in the construction of the Kulladghee road, for instance, been to open up the rich country around, but particularly behind it, the more obvious line of road to have selected for such a purpose would have been one direct from Kulladghee to Neepanee, and thence by the Phonda ghaut to Viziadroog; or it might have been led to the large and industrious town of Sunkeshwur, a little to the south of Neepanee, from which it might have been continued westward, until it joined the road laid down on the map as being under construction from Belgaum to the Phonda ghaut. On this latter line, viz. that from Kulladghee to Neepanee, a little attention has recently been bestowed, by slightly improving a track formerly just practicable for carts during the fair weather. It is certainly suspicious to find that the point on which all the roads in the system converge is that which is the head-quarters of the military division; and that the points to which they all ramify from this centre are not only outlying military stations, but all the outlying military stations of the division. Whatever commercial importance these roads may have assumed, is merely a happy coincidence to their position as military roads. Besides, as

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already intimated of the Dharwar road, neither it nor the Kulladghee road will accomplish a moiety of what they are capable of doing for trade, so long as their connexion with the coast is interrupted by the transcendent difficulties of the Ram ghaut.

From Poona to Belgaum, as we have already seen, the north and south line of road is still incomplete. If the two military systems of roads have been thus left isolated, it is simply because their junction, however *convenient* it might have been, was not deemed *absolutely necessary*. All the military stations along the line are accessible without such junction. Thus Kolapoor has been deemed more accessible from Belgaum than from Poona, and Sattara more accessible from Poona than from Belgaum. As there is no military station between Sattara and Kolapoor, the road between these two points is, as already seen, the most utterly neglected along the whole line. But, driven to do something by the cry for internal improvements, government is proceeding to unite the two systems of roads by a complete north and south line, to extend from Belgaum to Poona. If it is driven by an external pressure to do something, it may as well meet the cry by doing this, which makes a show of doing something *useful* at the same time that, if in a military point of view it is not absolutely indispensable, it may at least be found convenient. Government is, therefore, as indicated on the map, improving the road northward from Belgaum to Kolapoor, on which, as before noticed, some outlays were formerly made, but which is now to be brought up to the standard of a first-class road of the second grade, that of *made roads*. The link between Kolapoor and Sattara, that least useful in a military point of view, will still be incomplete; but judging from the past, it will, if the pressure from without continues, and

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the Indian authorities are much longer left as free to act in the matter as they have hitherto been, be both begun and finished before other roads which would be of infinitely greater service to the country are taken into consideration.

Such being the nature and position of the Deccan roads, and such the spirit in which they have been both conceived and executed, I can scarcely be accused of having been far wrong in stating that, for all commercial purposes, the business of road-making had yet to be begun, even in the Deccan.

The total extent of the made road actually completed does not exceed 636 miles, which total is thus made up:

	Miles.
Road from Panwell to Poona	70
„ Poona to Jooneer, about	50
„ Poona to Ahmednuggur, about	70
„ Poona to Indapoor	90
„ Poona to Sattara	76
„ Nagotna to Sattara	100
„ Vingorla to Belgaum, about	70
„ Belgaum to Dharwar	47
„ Dharwar to Madras frontier, about	33
„ Belgaum to Kulladghee (only 18 miles of the 74 really made road)	18
„ Kulladghee to Bugulkote	12
Total	636

The road from Belgaum to Kolapoor, already alluded to, is so nearly finished on the scale of a "made road," that it may be added to the foregoing, which will make the sum-total as nearly as possible 700 miles. This includes about 150 miles of made road in the Konkan, which, in respect to roads, has to be considered in con-

nexion with the Deccan; inasmuch as all the great roads in the Deccan must themselves terminate in, or be connected with, some other roads which terminate in the Konkan.

I do not here include the road, which is sometimes set down as a made road, leading from Belgaum, by the Phonda ghaut, to Viziadroog on the coast. It was constructed by Major Del Hoste, at an outlay, exclusive of the cost of the ghaut, averaging about 300 rupees (30*l.*) per mile. Of course, with such limited means no one could construct a road which would rank with the Sattara, Ahmednuggur, or Dharwar roads. It was, however, a very great improvement upon the old track. On its being finished, government sent a committee of professional engineers to examine it, who at once condemned it, the ghaut being included in the condemnation. Although it cannot be classed with the made roads, technically so called, it may still, like the cheaply-constructed Kolapoor roads alluded to, be regarded as of an intermediate grade between a mere practicable fair-weather road and a made road. But government has chosen to consider it as no road at all; for you will perceive that, on the maps, it is classed with the roads "under construction." This being so, exception cannot be taken to my excluding it from the category of made roads.

On maps of India giving, like this (No. 1), different districts in detail, a very respectable figure is cut by a variety of roads laid down under different designations, such as Fair-Weather Roads (practicable for carts), Frequented Tracks, Post-Office Tracks, &c., the first mentioned being the highest grade of the series. But no one would think of including such tracks among the roads, properly speaking, of any country. A road, in its proper and ordinary acceptation, implies something artificial,—the

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conjoint result of labour and expenditure. But these are natural tracks, merely indicating the course taken by an irregular traffic over the open surface of the country. The best of them are practicable, during the fair weather, for carts, simply because at that time much of the surface of the country is so. Generally speaking, the open fields are then *practicable;* but no sane man would think of including the open fields, because they are so, amongst the roads of the country. And so with these practicable fair-weather roads, on the *practicable nature* of which a striking commentary is offered by the fact, that they are often *deserted* for the *open fields,* when the latter are the *more practicable* of the *two.* A merely practicable road, especially when only practicable at certain seasons, can never be very serviceable to commerce; for when it is made use of for the transport of produce, the cost must be ruinous, as the proportion of power to produce must be ridiculously great. As for the *Frequented Tracks* laid down, they are, of course, to be found very numerous in every thickly-peopled country, and are a grade lower in the scale than those just considered. The lines laid down as Post-Office Tracks are no better; for where, as in India, the mail is generally carried by foot-runners, the post-office is not particular as to turnpikes. All these roads are, in the main, most useful, as indicating the courses which good made roads should pursue; but in estimating the quantity of made and really available road in a country, they are obviously not to be reckoned.

Of the total of 700 miles of made road, only 140 miles are available for traffic throughout the year. The Poona and Ahmednuggur roads are alone thoroughly bridged (that from Belgaum, viâ Dharwar, to Coompta, being only partly so); the traffic of the remaining 560 miles being interrupted, during the greater part of the rainy season, by

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the streams which intersect them. Startling is sometimes the suddenness with which an interruption of this kind may take place. A stream which, when less than a quarter of a mile off from it, you may perceive to be quite practicable, may, by the time you reach its bank, have become a foaming and impassable torrent, and remain so for days. It is to such interruptions that *four-fifths* even of the made roads of the Deccan are yet liable.

It will be seen, too, that about 300 miles, or nearly one-half of all the made roads, consist of roads pursuing a north and south direction, which, as heretofore shown, are the most useless, in a commercial sense, that could be constructed. The whole line from Gooneer to Belgaum is of this description, as is also that from Nagotna, viâ Mahableshwur, to Sattara, which, in many parts of its course through the Konkan, is overgrown with grass almost to the centre. The inutility, as regards trade, of the line from Poona to Belgaum, will be obvious at a glance. It is evident that, in addition to its length, its many difficulties, and the great expense which these must entail upon traffic by it, the direction which it pursues is fatal to its use as a commercial road. The districts to the west of it will, of course, make no use of it; for if they have any surplus to dispose of, they will seek the coast by the most direct practicable routes over the ghauts into the Konkan. Those immediately to the east of it will cross it in seeking the same routes to the coast as are pursued by those to the west of it, using it here and there, perhaps, for a few miles, when doing so will facilitate access to these routes. The districts more remotely to the eastward will also simply cross it in taking the most direct routes westward to the sea. And should they, for any reason, prefer a longer land carriage, and make direct for Bombay, say by Poona, they will never come in sight of the line in question,

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simply because they can not only take a more direct line to Poona than it offers them, but also one free from most of the difficulties with which it has to contend in having to surmount almost every spur of the ghauts, and to cross almost every stream which descends from them, between its two extremes. Yet it is upon roads thus *utterly useless* in a commercial point of view that the Bombay government has expended much more than one-half of the whole sum laid out upon roads in the Deccan; whilst the remainder of the made roads is, as already seen, of but *partial utility* in this sense.

The north and south lines of road are of as little service for passenger as they are for goods traffic. The southern Mahratta country is most accessible from Bombay by sea; so that passengers generally proceed by Vingorla, unless they have an object in going through the interior. The link from Poona to Sattara is much more travelled than the remainder of the road to the south of the latter place; for this, amongst other reasons, that in proceeding from Poona to Mahableshwur, many parties take the road by Sattara. On my way north from Belgaum to Sattara, I stayed for a night at Kurar, about half-way between Sattara and Kolapoor. There is a government bungalow here; and on leaving next morning, I put my name down in the travellers' book, as is the custom. The name which stood next before mine, and which was that of a sick officer, had been inserted precisely a month before. This will serve to show how valueless this line of road is at present for traffic of any kind.

But it is sometimes said that it is useful for postal purposes, and that postal and commercial purposes are identical. When the Indian mail comes to be carried upon wheels, any improvement of the line of road taken by it will be an advantage to the general interests of the

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country; but so long as it is carried, as it now is, on foot, over all kinds of roads, the value of the road in question, as well as that of other made roads, will in this respect be *nil*. A foot-runner can run as fast on a country track as upon a made road; in proof of which is the fact, that the mail does not reach Sattara from Poona, between which there is a made road, in less time than it takes to reach Kolapoor from Sattara, between which there is no made road; the distance in both cases being about the same.

The portion of the Deccan under consideration, together with the collectorate of Rutnagherry (the southern Konkan), lying under the ghauts, and between it and the sea, and which, as already said, must be considered in connexion with the Deccan so far as the subject of roads is concerned, comprises an area of about 53,000 square miles, with a population, exclusive of that of the island of Bombay, of about six millions, being 113 to the square mile. For such an area and such a population, 700 miles of made road, even if every mile of it were so situated as to be most available for trade, must be denounced, by every one who can express a disinterested opinion, as a scandalously insufficient provision in respect to that which is now regarded as the chief material pre-requisite to the civilisation and progress of a country. The aggregate annual revenue of the district was, last year, about 97 lacs of rupees (970,000*l.* sterling). The aggregate revenue drawn from it since it came into our possession cannot have been much under 25 crores of rupees (25,000,000*l.* sterling). Yet it is for this that we have conferred upon it in return the inestimable advantage of 700 miles of road: 630 of which are of a secondary class; 560 of which are virtually impracticable for traffic during a portion of the year; and nearly one-half of which would be useless, from

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their position, to commerce, even if, in point of construction, they were of the most perfect description. Taking them one with the other, the best with the worst, the perfect with the indifferent, their highest average cost, including that laid out on ghauts and bridges, and on the metalled road from Panwell to Poona, as well as on repairs, did not exceed 3700 rupees per mile; giving about 25 lacs as their total cost, which is about 27 per cent of one year's revenue of the districts, or about *one* per cent of the whole sum drawn from it since it came into our possession. Had this been a sacrifice made exclusively to the trade of the country, it would have been but a poor equivalent for what the district has yielded to government; but, as I have already shown, the sacrifice has been, not to the genius of trade, but to the god of war; and if trade has in any way benefited by it, the result has been more accidental than designed.

Compare this with the state of things in England, with her 30,000 miles of turnpike-road, being about a mile for every thousand acres of her surface, and for about every 600 of her people. It may be objected to this comparison, that the material improvement of England is the slow growth of ages, aided by her vast accumulation of capital. But the whole of the present road-system of England (railways, for the present, out of the question) is of comparatively recent development, and was still in its infancy when the Deccan fell into the hands of the East India Company.

Compare it, again, with what has been recently done in America. Since 1829, upwards of 10,000 miles of railway have been begun, completed, and put into operation there. Upwards of 9000 miles are now under construction, and will be completed ere another hundred miles of road are given to the Deccan; so that, in the course of about two

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years more, there will be about 20,000 miles of railway in operation in the United States. This will be a mile of railway for about every 1200 people, the proportion now being a mile for about every 2400 people. In addition to this, upwards of 5000 miles of canals have been constructed, or one mile for every 4800 people. It must be remembered, too, that these stupendous provisions for locomotion have been made in addition to the enormous natural facilities for traffic and intercommunication with which their vast rivers and lakes had already provided the people of the United States, and to the hundreds and thousands of miles of common road which they possess; not only practicable roads during the greater part of the year, but good roads, serviceable for the heaviest traffic. And above all, let it be remembered, that every thing which has thus been done in America, in the shape of artificial facilities for intercommunication, has been proposed, undertaken, and completed since the East India Company became masters of the Deccan.

Crown colonies are generally regarded as the most unfortunate, because the worst governed, of our colonial possessions. But even the crown colony of Ceylon, with its million and a half of people, and its less than half a million of revenue, makes a respectable show in the shape of roads, as compared with the possessions of the Company. It has about 150 miles of excellent road, well bridged throughout, and available all the year round, being equal to what the Deccan can boast of. In addition to this, it has about 172 miles of what is called "good carriage road," and 232 miles of what is called "carriage road," making in all 554 miles of carriage road, nearly two-thirds of which is practicable all the year round, and about a third of which is in first-rate order throughout the year. The bridging of these roads is, in some cases, on a stupendous

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scale, especially when, as on the Colombo and Galle road, a number of wide back-waters have to be crossed. In such cases long bridges are supported upon piles, the structures being of so substantial a nature that the public coach dashes over them at the rate of eight miles an hour. The same with the long bridges of boats, with which the rivers are frequently found to be crossed. One of these occurs close to Colombo, on the Kandy road, spanning the second river in point of magnitude in the island. Were this river in the Company's territories, it would be unbridged to this day, on account of the *impossibility of bridging such a river*, liable as it would be to sudden floods from the monsoon. It so happens, however, that the stream in question is as liable to sudden and great inundations as is any river in Western India, from the immense quantity of surface-water occasionally thrown down into it from the hills in the interior. Yet what would be *impossible* in India has been found quite *practicable* in Ceylon. In addition to this, new roads are constantly being made. The secret is, that large portions of the interior are occupied by European coffee-planters, who will not permit the government to sleep over this matter. Had Europeans been thus settled in the Deccan for the last thirty years, the Company would have spent more money in material improvements, and less in powder and shot.

Of how little utility the made roads in the Deccan are, as compared with the wants of the country, is proved by the spontaneous testimony of several of the Company's officials. In speaking, in his report, in 1848, on the Bunkapoor talook of the Dharwar collectorate, of the importance of maintaining and extending the cotton trade of the district, more especially in connexion with the reduction which was being made in the assessment, Captain Wingate makes use of the following unequivocal language, in urging

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upon government the necessity which existed for internal improvements:

"My own conviction is, that nothing short of extensive improvements in the internal communications of the country will meet the exigencies of the case; and that unless these be *speedily undertaken,* the revenue and trade of this presidency will receive a shock from which they may never recover."

A little further on he speaks of the roads already existing as being "few and inadequate to the wants of the country." Language could scarcely be stronger than that just quoted. The words "speedily undertaken," in the first quotation, I have underlined, as corroborating the statement which I have already made, to the effect that a liberal and efficient system of roads is indispensable to the success of the new financial scheme introduced into the Deccan, and that government has left itself no alternative but to undertake their construction.

In 1849, the collector of Belgaum thus writes: "The season of 1848-49 has been generally favourable, and the harvest plentiful. But from the want of roads, and consequent non-access to market, the benefit to the ryots has not been proportionate. It is a well-known fact that, in the present state of the communications of the country, a good or bad season is alike a matter of indifference, as regards the farmer's profits. In the former the village market is glutted with grain, which the monopolist banyan takes at his own price; whilst in the latter the prevailing scarcity admits of the ryot obtaining a fairer price for his more limited produce."

Does not this bear out, and, if possible, more than bear out, all that I have said, as to the comparative inutility for commercial purposes of such roads as have yet been made in the Deccan? At least, as regards the southern Mah-

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ratta country, of which these two witnesses speak,—and there could be none more competent to do so,—the testimony is conclusive, that scarcely any advantages have accrued to it from the existing roads. And what has been done since these frank and unequivocal appeals were made? Nothing whatever to meet, to any adequate extent, the exigencies which gave rise to them.

Such appeals coming from such quarters naturally lead us to a consideration of the distribution of the made roads. Of the portion of them which is above the ghauts, amounting to about 550 miles, the collectorates of Poona and Ahmednuggur have certainly the lion's share, having an aggregate of about 300 miles between them, which radiate like a star from Poona to the ghauts, to Jooneer, to Ahmednuggur, to Indapoor, and to the Nera. Sattara has but sixty-four miles, viz. twenty-eight from Nera Bridge to the town of Sattara, and thirty-six from the town to Mahableshwur and Purt up Ghur, on the mountain border between the Sattara territory and the Konkan. Belgaum, when the link between the Kolapoor frontier and the town of Belgaum is finished, will have about 100 miles of road from the Kolapoor to the Dharwar line near Teygoor, and about sixty miles from the top of the Ram Ghaut to Bugulkote; for I still, for reasons already given, exclude the greater part of the Kulladghee road. The smallest share falls to the lot of Dharwar, which can only reckon fifty miles of made road throughout its entire length and breadth, viz. that leading from Teygoor, on the Belgaum line through the town of Dharwar and Hooblee, to the Madras frontier, a little beyond Turrus.

We thus see that the greater portion of the made roads falls to the share of the northern part of the district under consideration; and that the roads with which that part is supplied, penetrate in one case wholly from the coast to

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the Nizam's frontier, and in another nearly so. It is thus wholly at one point, and nearly so at another, traversed throughout its entire breadth by made road. But this, from the ghauts all the way back to the frontier, is the poorest section of the Deccan; and but for the forced diversion to Ahmednuggur and Poona of the Berar traffic, the roads permeating it would add but little to the exportable produce concentrated on the coast. Now compare the situation, as regards roads, of this part of the Deccan with the whole of that portion of it which lies between the Nera and the Madras frontier, and between the Nizam's boundary and a line drawn south from Indapoor to the town of Dharwar. The portion thus indicated comprises not only a moiety of the British portion of the Deccan south of the Nera, but by far the richest, most fertile, and in every way the most improvable part of it. In addition to this, it may be said to comprise the *whole* of the *cotton-growing district*, the cotton grown to the west and north of it being scarcely a perceptible feature in the cultivation of the country. Now it is obvious that the value of roads leading directly to, and terminating on, the coast, depends chiefly, if not exclusively, upon the extent to which they afford outlets to this part of the country. Let them be ever so unexceptionable in all other respects, it is evident that they must fall far short of their object, unless they are pushed far enough to the eastward thoroughly to probe this district; and not only so, but also to facilitate communication between the part of the Nizam's country which lies immediately beyond the frontier and the coast: but obvious though this be, you will see that hitherto it has not been acted upon. From the Nera to the Madras frontier *there is not a single line of road* which, commencing on the coast, runs continuously eastward to the district in question. The Bugulkote road is

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there to be seen, but it is an isolated specimen; the 54 miles of road extending from Kulladghee to Nessurghee, within 18 miles of Belgaum, as already shown, being such as cannot be included within the category of a made road. This is a serious break in the line between Vingorla and Bugulkote, portions of the track constituting the break, especially such parts of it as traverse the black soil, being sometimes almost impassable. Of course, the weight of the load to which a given amount of power is to be applied for transport between Bugulkote and Vingorla must be measured by the exigencies of this, the worst part of the road; so that although the road is a made road for about 100 of the 150 miles which it traverses, the same want of economy in the application of locomotive power must be observed, at least so far as the through-traffic (the most important) is concerned, as if the road were throughout as bad as the break in it. In addition to this is that other weak point in the road, the Ram Ghaut, more than once already referred to, as of itself sufficient to render almost useless any line of road of which it formed a part.

Of the cotton district comprised within the section of the Deccan in question, the greater part falls to the share of the collectorate of Dharwar. But we have seen that it has, at the same time, but the smallest share of the made road, 50 miles being all that it can boast of for an area of 3798 square miles, or 2,430,720 acres; being one mile of road for every 76 square miles, or for every 48,640 acres of surface. Whilst it produces nearly 50 *per cent* of all the cotton exported from the Deccan, it has been favoured with about 7 *per cent* of all the roads which have been made in the Deccan. The sum spent upon its 50 miles of made road was 64,530 rupees, or about 1290 rupees a mile. The revenue of Dharwar now averages nearly 12 lacs annually; so that had this sum been so spent in one year,

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it would have been but about 5 per cent of the revenue; but as the expenditure was spread over many years, the per-centage is scarcely appreciable. The destitution of Dharwar in this respect can be much better illustrated by presenting a picture of it to the eye, than by trusting to any impression which words alone could convey. Map No. 2, appended to this report, illustrates the present state of the collectorate as regards roads. The only made road which it possesses extends from Teygoor on the Belgaum frontier, viâ Dharwar and Hooblee, to the frontier of the Madras presidency. From Teygoor to Hooblee its direction is south-east; but at the latter place it deflects to the west of south, so as to put it in communication with Coompta. Teygoor is in the wet section of the collectorate, that in which irrigated cultivation prevails. Dharwar is the dividing line between the wet and the dry crop districts, the latter extending to the eastward of it. But although there are cotton-fields not far from Dharwar, the cotton district does not commence for some distance to the eastward of it, the intermediate country being chiefly devoted to the cultivation of grain, for which it is more adapted than for cotton. Hooblee may be regarded as in the borders of the cotton district, which extends to the east, the north-east, and the south-east of it. It thus appears, that it is just as the made road touches the district which, of all others, it is most important that it should thoroughly permeate, it suddenly deflects again towards the coast, leaving the whole of the cotton district without a single mile of good road from one end of it to the other. It is all very well to connect Hooblee with the coast, although it is very questionable whether, with a view to the Bombay trade, Coompta is the most favourable point on the coast with which it might be connected. The transport of produce of all kinds may be thus made compara-

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tively easy between Hooblee and Coompta; but think of the difficulties to be encountered ere the produce can be made to converge from all sides upon Hooblee as the common starting-point. Even the connexion between Hooblee and Coompta is not at all what it should be; but that between Hooblee and the interior, in most cases, almost beggars description. It is no wonder that the cotton, instead of being carried in carts in the form of heavy and well-packed bales, is transported in loosely-packed bags, chiefly on the backs of bullocks. As it is carried into Hooblee, so of course it departs from Hooblee for the coast, affording another instance of how the load which has to be carried over a road consisting of two parts, the one bad and the other comparatively good, has to be gauged by what is practicable on the bad part. The Deva Munny Ghaut too, by which the Konkan is gained, on the way to Coompta, although not quite so bad as the Ram Ghaut, is another formidable impediment, which might be greatly mitigated, to the communication by this route between the coast and interior. From the number of cattle which have thus, at certain seasons, to be employed in the transport of cotton, the Coompta road is frequently so blocked up at certain points as to be impassable for days to all other traffic.

But rising from the contemplation of these very unsatisfactory particulars, what do we find as the general result of what has actually been done? The great object was, or should have been, to make the coast readily accessible to the interior; and it has been particularly in connexion with that object that I have dwelt upon the comparative inutility of the existing roads. In a pent-up country like the Deccan, a road could scarcely be made any where, or in any direction, that might not be of some, however little, local advantage. So with the present

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system of made roads: if they do not contribute much to the external trade of the country, they have certainly been of some use to its internal trade. But as regards access to the coast, with a view to facilitating and promoting the external trade of the country, what is the general result of all that has been done? A glance at the map will exhibit three different points on the coast to which made roads lead from the interior,—Bombay, Vingorla, and Coompta. Now Vingorla has, for reasons already given, not yet become an outlet of any consequence for trade. It is a well-known point upon the coast, as leading to the great stations in the southern Mahratta country, but is scarcely ever ranked with the trading ports. We are thus reduced to two outlets, Bombay and Coompta, one in 19°, and the other in about 14½°,—two ports in a distance of about 320 miles from each other. I have before shown that Bombay is, viâ Poona, less an outlet for the Deccan than for the great fertile and pent-up district of Berar, which lies further in the interior and to the north-east of it. Thus that which is virtually the *sole outlet* for the Deccan is the southern one at Coompta, which fortunately affords an outlet, however circuitous may be the route to it, to the most important part of it. Coompta, again, is not in the Bombay presidency; so that the Bombay government cannot yet be said to have provided *on its own coast* a single direct or efficient outlet for the Deccan, which lies wholly within its own jurisdiction. And look at the position of Coompta *as an outlet to Bombay,* for the whole region lying in a north-easterly sweep between it and Beejapoor. The journey to the north or north-west is commenced by a long, tedious, and expensive journey to the south-west, which nearly doubles the length and cost of the sea-voyage to be afterwards taken to the north. Does not this realise the old fable of the road which

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once led from Liverpool to London by the way of Kilkenny?

Such, then, as I have shown them to be, are the made roads in the Deccan, and such their objects, distribution, and general results. Let the public judge between the country and its rulers.

It may be here urged, however, that but a partial view has, so far, been taken of the internal improvements in the Deccan, inasmuch as, in noticing what *has been done*, no account whatever has been taken of what is *being done*. But as the earnestness and energy of a government are tested not so much by what it *begins* as by what it *finishes*, I have purposely confined myself, in what I have hitherto said, to what has been *actually accomplished* after more than thirty years' possession of the country.

Reference to the map will shew the roads under construction to be brought up to *made* or second roads. Nearly all of them are designed with a view to military objects, and almost without regard to the commercial advantages, or even the necessities, of the presidency.

Were any stronger condemnation of government wanted than that furnished by its past neglect, it would be supplied by the fact, that notwithstanding such neglect, it is still doing so little. It is true that, in Sattara, no less than about 14 per cent of the net revenue was last year spent in public works. But Sattara, like the Punjaub, is for the present a pet child, because one of the youngest of the family. But that so large a proportion of the revenue will not long continue to be so applied will be inferred from the following explanation, furnished me by the commissioner, of the extent to which so laudable an appropriation of the public funds was last year carried. He writes thus: "I may mention that the large amount devoted to improvements in the Sattara territory, in com-

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parison with other provinces, has arisen from government having applied various balances to this purpose, which could not so fitly have been appropriated otherwise." As are the balances, so in future will be the appropriations; at least, this would seem to be the inference to be drawn. In Belgaum, the aggregate amount spent on roads during the last ten years was 20,508*l.*, the aggregate revenue received during the same period having been about a *million and a half sterling*, the expenditure in this form having consequently been *under* 1¼ per cent of the receipts. In Dharwar the sum which is being now actually expended on roads in progress is under 9000 rupees, which is about equal to the salary of the first assistant to the collector, or less than *four-fifths of one per cent* of the revenue for the past year, which exceeded 11½ lacs of rupees. A further sum, as already seen, of about 9000 rupees, has been appropriated; but the roads on which it is to be expended have *not yet been commenced.* The two sums put together amount to but little more than half a year's salary of the collector. One or two of the tracks already mentioned, as intended to intersect portions of Dharwar and Belgaum, are designed to be prolonged into Sholapore. In addition to these, two cleared tracks, passable for carts in fair weather, are "in contemplation;" whilst a road from the Shorapoor district, westward, through Beejapoor and Meeruj, and by the Phonda Ghaut to the coast, is "under consideration."

Such, then, is the paltry sum-total of what *has been* and what *is being* done in the shape of roads for the Deccan, and more especially for the cotton-growing districts in the southern Mahratta country. Under these circumstances, it is evident that government had better not plead what it is doing in extenuation of what it has omitted to do.

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That I am not attaching too much importance to good roads will be evident, when it is considered that, after navigable rivers, good roads exercise perhaps the greatest influence over the distribution of population. I may here give one instance to prove the truth of this. I allude to the road in Ceylon extending from Colombo to Galle. It is seventy-two miles in length, and the villages along it follow each other in rapid succession, like so many beads on a string. The population between the two points, which has been chiefly attracted thither since the construction of the road, is enormous; and a more thrifty population it would be difficult to find any where east of the Cape. They are chiefly engaged in making arrack, cocoa-nut oil, jaggery, and coir (the fibre of the nut used for making ropes), all from the cocoa-nut trees, which line the shore in myriads all the way to Galle. The industry of the people is stimulated by the ease with which the road enables them to dispose of their produce. And so it will be when new roads open up the Deccan. Population will then concentrate upon spots now scarcely inhabited, and property will necessarily undergo those mutations in value which are the necessary consequence of alterations in the distribution of population.

To sum up all, I have pointed out the position of the Deccan, in relation to its natural outlets on the coast, and the physical obstacles to be surmounted in putting it in direct communication with these outlets. I have indicated the lines of road which, from the conformation of the country and other circumstances, would, whilst they would be *most difficult* of *construction*, be also *most useless* to the general interests of the country; and pointed to other lines, which, if undertaken, would not only prove themselves *most useful* to the country, but also, fortunately, the *most easy* of *construction*. I have then adverted to what go-

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vernment has done in the shape of roads, explaining their respective positions and directions, and the different classes in which they are found; disclosing the military spirit in which they were conceived, and showing that about one-half of them are in positions and pursue directions which multiplied the difficulties of constructing them, and which, even were they all roads of the very first class, and free from most of the obstacles with which they are beset, would still render them comparatively useless for trading and commercial purposes. I have then pointed out what government is now doing in the way of road-making, from which it appears that the paltry efforts of the present are no atonement for the gigantic omissions of the past. I have lastly shown the infinitesimal proportion of the revenue spent upon roads in several of the collectorates, and pointed out the general and barren results which have accrued to the Deccan, in a commercial point of view, from what has been and is being done. With this recapitulation I take leave, for the present, of the subject, satisfied that what I have written will convince every impartial mind that, notwithstanding what has been done, and which, unless well understood, is calculated to blind the inquirer, the vast, fertile, and pent-up regions of the Deccan, particularly to the south and east, have, as yet, had no real opportunity offered them of developing their great and multifarious resources.

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CHAPTER III.

IRRIGATION.

THE GODAVERY — THE DECCAN AND ITS RIVERS — NATIVE MODE OF IRRIGATION — DUTY OF GOVERNMENT — ITS EXPENDITURE AND ITS REVENUE — GOVERNMENT REGULATIONS — CONCLUSION.

THERE are some people who permit little things so to engross their whole attention, that they make no account of the greater objects of which they form but insignificant parts; in the same way that a sixpenny-piece, when brought close to the eye, will exclude the whole firmament from view. It is so with many, and especially with some in official positions, who are, in certain quarters, regarded as the best, and indeed the only authorities on Indian affairs, in contemplating the public works in which the government of India is engaged. In no respect, perhaps, is this mistake so frequently committed as when works of irrigation are the objects of contemplation. The observer takes up his position, for instance, on the delta of the Godavery, and surveys the works which are in pro-

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gress to irrigate it. Struck by their magnitude, their obvious utility, and the results which are certain of realisation from them, he at once does homage to the liberality and wisdom of the government which devised and is executing them. But all this time his attention is entirely taken up with the operations before him. He forgets the mighty area of which the delta of the Godavery is no larger a part than the Isle of Thanet is of the United Kingdom; and holds that, because government is engaged in large and useful works there, it must be acquitting itself of its entire responsibility as regards the promotion of irrigation. Were the mistake and its consequences to go no further, the evil to be apprehended might not be great. But those who thus first deceive themselves are frequently but too successful as agents in misleading others. The ignorance of, and indifference to, Indian affairs attributable to the great bulk of Englishmen, unfortunately render them very accessible to false impressions, derived from the misrepresentations of those who either unwittingly or purposely mislead them. Thus it is that the nation is frequently induced to regard the *exceptional acts* of the Indian government as truly indicating its *general* and *uniform conduct*;—a mistake no greater than it would be to take one act of simple justice as the standard whereby to judge of the whole conduct of a man whose life has, with that solitary exception, been a constant tissue of fraud, peculation, and oppression.

It would not be difficult to show that the money which is being expended on works of irrigation at the mouth of the Godavery might be far more usefully though less ostentatiously applied elsewhere for the promotion of the same end. But thus applied, it would redound far less to the reputation of a lucky engineer, or the *éclat* of a jobbing government. Before, however, we accept such works as

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acquitting the Indian government of its responsibilities, it will be well to extend observation to other and vaster districts, quite as much in need of artificial aids to irrigation as is the delta of the Godavery, with a view to ascertain how far government is aiding them in the construction and maintenance of those simple and unostentatious works, so necessary, by increasing their fertility, to promote their comfort and prosperity.

The Deccan, as already shown, is divided into two distinct sections as regards physical conformation, the hilly section and the level one; the former occupying about one-third of the whole area lying between the ghauts and the Nizam's frontier, and stretching immediately eastward of the ghauts to the average distance of from thirty to forty miles. From Belgaum, southwards, the lateral ranges become lower than to the north, but penetrate, in the form of gentle undulations, further into the interior. The rest of the Deccan, lying east of this tract, and between it and the dominions of the Nizam, is one vast plain, broken only here and there by some of the larger ridges, like that which stretches eastward from Neepanee, and approaches within about thirty miles of the frontier, forming for about 100 miles the southern limit of the valley of the Krishna.

These two tracts present as great a difference of climate as of physical aspect. In the hilly district, and particularly the western portion of it, the rains during the monsoon are heavy and continuous, pouring, through almost countless streams of all sizes, an immense flood of water into the Krishna. The quantity of rain which falls upon the level tract, on the other hand, is never great, and, unfortunately, never regular. Indeed, towards the south, it is chiefly indebted for its necessary supply of moisture to the showers with which the Madras monsoon furnishes it from the east. These are sometimes regular and copious,

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at others scanty and capricious, as to the time of their appearance. Were it not that the great bulk of the land of which this vast and fruitful tract is composed is of a quality enabling it readily to imbibe and long to retain moisture, it would be impossible for it to bear the heavy crops with which it is sometimes seen covered.

A difference in cultivation is incident to this difference of climate. In the hilly or wet tract irrigated cultivation is carried on to a very large extent, and some of the best rice which leaves India is here grown. In the flat district, where the rain is scarcer, farming necessarily takes the direction of dry crop culture.

The river-system of the Indian peninsula is simple, and yet strikingly grand. With the exception of the small streamlets in the Circars and the Carnatic, which, during the Coromandel monsoon, add their insignificant contributions to the vast volume of fresh water thrown annually upon the Bay of Bengal, the whole peninsula, from the valley of the Taptee, southwards, and from the ghauts to the Coromandel coast, is drained by three great rivers, the Godavery, the Krishna, and the Cauvery. The sources of the Godavery lie in the region of the ghauts, which stretch northward from about the latitude of Bombay to the Taptee. The Cauvery has its rise in, and receives its tributaries from, the southern section of the great chain; that lying to the south, say of about latitude 13°. The whole intermediate district, and the immense section of country stretching in a wedge-like form eastward to the Bay of Bengal, is drained by the Krishna. The section of the ghauts drained by it extends from about latitude 19° north to about latitude 13° north, being fully 6°, or about 400 statute miles, in length. Such, together with its numerous and stupendous ramifications to the eastward, already alluded to, is the magnificent depository from

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which the Krishna, in full sight of the Arabian Sea, draws those abundant supplies of fresh water, which it pours periodically into the Bay of Bengal, without any adequate means being taken to turn them to any useful purpose, either as connected with navigation or agriculture.

The system by which the Krishna drains the region in question is as follows: the Krishna itself is the great artery, rising in one of the loftiest pinnacles of the ghauts at Mahableshwur, and for several hundred miles of its course receiving directly the contributions of numerous minor tributaries. Its two great tributaries are the Bheema and the Toombuddra. The former rises amongst the ghauts a little to the south of Bombay, and flows in a south-easterly direction across the Nizam's frontier, about seventy miles beyond which it falls into the Krishna on its northern bank, after having collected the waters of many tributaries, the greatest of which is the Nera. The Toombuddra and its chief tributaries rise in the Mysore ghauts; their collective supplies, after flowing in a north-easterly direction, falling into the Krishna on its southern bank, about seventy miles lower down than the confluence of the Bheema. The following rough chart, without any pretensions to geographical correctness, will better illustrate this.

It is evident that a river-system like this, permeating a country which, for two-thirds of the year, is visited by scarcely a single shower, looking all that time as parched and sterile as the desert, and being as denuded of vegetation as a macadamised road, might be turned to the greatest possible advantage as a means of extensive irrigation. It is already turned, to some extent, to this purpose, in the district lying immediately east of the ghauts, where the streams are most numerous, and from the more rapid descent in their channels most easily taken advan-

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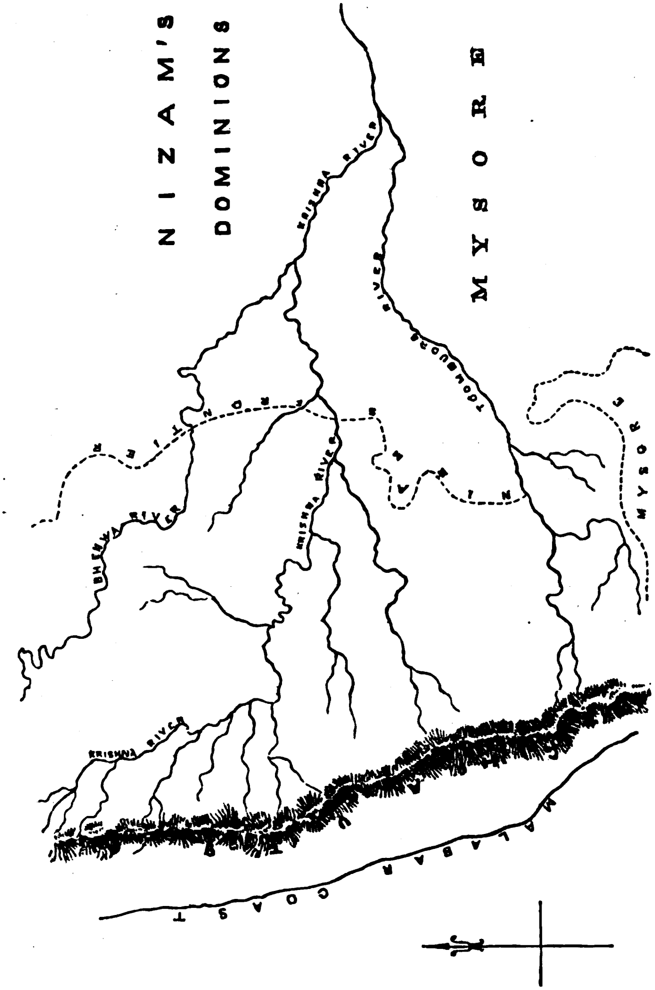
tage of. But from the great quantity of rain which falls along the ghauts and throughout the district intersected



by their lateral spurs, this is precisely the portion of the country which is least in need of artificial contrivances for

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the purpose of irrigating the soil, although even it is far from being wholly independent of them. It is to the eastward, where the high lands descend into the broad plain, where the number of the streams is comparatively small, where they are consequently far apart and their flow is sluggish, and where, from the want of regular and copious supplies of rain, the country is sometimes brought to the verge of famine, and frequently reduced to a degree of distress only short of this,—that not only has the least been done for irrigation, but that the greatest difficulties offer to its accomplishment. In the ghaut districts, from the number of the streams, great and small, and the inclination of the valleys which they drain, the necessary works are much more easily constructed; for the more numerous they are, the less formidable in point of cost and dimensions need each of them be. Each work having but a limited district to supply, its construction and appliances may be of a rude description, without impairing its efficiency or endangering its existence. But not so with the works which would be necessary in the more level districts beyond. There, from the sources from which the water-supplies would be drawn being comparatively few, each work would have a larger district to irrigate and fructify, and must consequently be constructed on a scale very different from that of the rude bunds in the mountain country. The earthen bank, the insecure sluice, the confined and neglected watercourse, will not suffice. The volumes to be collected require barriers of mason-work to retain them; the sluices must be perfect which are to secure the safety of the works; the watercourses must assume the dimensions of canals, and be kept carefully free of impediment; whilst, from the level nature of the country, the whole system, to work well, must be constructed in rigid subordination to the strictest rules of en-

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gineering art. Such are, in this respect, the circumstances of the two sections of the Deccan in question, such their respective wants, and such the only means of supplying them.

Nothing can be simpler or ruder in construction than the tanks made use of to irrigate the small but numerous valleys of the mountain tract. Across the different streams, at points where their torrents are manageable, dams made up of stone and earth are thrown to arrest the necessary supply of water. The land intended to be irrigated lies below the dam, or bund as it is called, the water being led to it by means of a watercourse cut in the soil. When the land to be irrigated consists of a gentle slope leading immediately off from the bund it is a very simple matter to furnish it with the necessary supplies of water. The slope is divided into a succession of level terraces, which retain the water supplied to them by a watercourse, frequently but a few feet in length, the uppermost terrace coming close to the mound which retains the water. This, however, is only the case when the water accumulated is supplied by one or by several small rills called into existence by the rains. When the stream is more formidable, the pent-up valley through which it flows is generally irrigated, on either side, from the dam. In that case, the main watercourses which lead off from either end of the dam are much longer, sometimes extending for miles, and larger in their other dimensions. They lead, on either side, along the foot of the elevated ground enclosing the valley, keeping as high up as the level of the tank will permit, and conforming themselves in their courses to the sinuosities of the ground which they traverse, here sweeping round a projecting point of the hill, and there accommodating themselves to indentations in its side. Parallel to the watercourses, and immediately below

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them, are the terraces which descend in succession into the centre of the valley, receiving, one after the other, their necessary supplies from subsidiary watercourses, leading to them directly from the main ones. It is thus that you will often see the richest verdure, as it were, in the lap of sterility, the desolate hills looking down upon the bright green carpet spread at their feet, and throwing its folds for some distance up their stern and weather-beaten sides. When the dam is strong enough to admit of it, the surplus water escapes freely over it; but when such a course would endanger its existence, the same purpose is answered by sluices carefully constructed at either end.

No matter how large may be the quantity of rain which falls, it soon disappears. Deluges of rain following each other in rapid succession, to be followed again by a dry season when no rain falls, will not suffice for any thing like regular cultivation. It is evident, therefore, that in the district in question, properly constructed reservoirs, with serviceable watercourses leading from them, are to be regarded in the light of permanent improvements to the land. As such, it is obviously the interest of the owner of the soil, or the party drawing rent from it, to aid in, or otherwise promote, their construction.

Did government in India occupy a similar position in respect to land to that held by government in England, such works, inasmuch as their execution would only tend to the enhancement of the value of private property, might be held not to fall within the legitimate scope of its action. But even then it might, without loss either of means or dignity, imitate the example of the imperial government in lending its aid by liberal advances, properly secured, for their construction. But their positions are not similar; they are dissimilar in this,—that whilst in England government is

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only *government*, in India it is both *government* and *landlord.* I have already shown that the changes which are being introduced into the financial system of the Deccan do not really affect the position of government as the proprietor of all the soil not held in alienation. We justly look for it, then, to perform the duties both of landlord and government. The duties of the landlord, however, it utterly neglects, whilst it performs the *duties* of government only to enforce the *rights* of the landlord.

But whether government be or be not proprietor in the Deccan, there can be no doubt but that it draws from the land, even under the new survey, all the rent which it can possibly bear. I have before shown you, in treating of this subject in connexion with Guzerat, how the Court of Directors, as far back as 1827, acknowledged the obligations, in this very respect, which the receipt of the rent imposed upon government. The court then acknowledged the expediency of constructing tanks and wells, when there was proof that their construction would be attended with advantage; and repudiated all doubt as to the "policy of disbursements by government on that account, *when the whole of the rent, or the greater portion of it, is received by government, as is received by it in almost every part of India.*" The Deccan cannot be withdrawn from the scope of this large and liberal admission; for not only is the whole of the rent of the land there taken from the cultivators, but it is *by government that it is received.* Let us see, then, what returns it makes for its receipts, and how far it lends its aid in the construction of works of permanent improvement.

No one who has traversed the district in question, from Kundalla to Dharwar, can affirm that the tanks are any thing like as numerous as they ought to be. Few of them exhibit signs of recent construction, although some of them

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show traces of recent repair. Indeed, so far as they are concerned, things do not seem to have much advanced in the district since the year when we dethroned the Peishwa. Whatever, then, may be its present conduct in this respect, the government has here scarcely any exculpatory antecedents to fall back upon. And what is it now doing? what in Poona, for instance?

The following statement was furnished me by the collector of Poona, in reply to a question submitted to him respecting the annual expenditure by government upon tanks and wells in the collectorate. He states that, for the three years ending 1850-51, that expenditure was as follows:

	Rupees.
In 1848-49	1,428
„ 1849-50	2,389
„ 1850-51	1,716
Total in three years . . .	5,533
Average	1,844½

During these same three years the net revenue was,

	Rupees.
In 1848-49	8,27,804
„ 1849-50	8,04,671
„ 1850-51	7,86,453
Total in three years . .	24,18,928
Average	8,06,309

This gives us an expenditure of a little more than a *fifth* of 1 *per cent*, or about 4*s*. out of every 100*l*. I have no means of showing how this magnificent appropriation has been distributed, whether for the repair of tanks or wells, or both, or towards the construction of new specimens of

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either. But you will be more capable of judging of the extent to which the average sum of 1844 rupees, thus expended, must have improved the face of the country and stimulated its agriculture, when you are informed that a single good well may cost 1500 rupees. For these three years, therefore, an appropriation has been made which would construct four good new wells; such being the measure of the improvement in this respect effected during that period, within a district comprising 5250 square miles, and from which upwards of 240,000*l.* of revenue has, within the same period, been drawn. If the money has not been applied to the construction of new works, it must, or part of it at least, have gone to the repair of old works. Now there are in Poona, according to the same authority,

Tanks	208
Wells	14,630

Few of which are in a sound state; and many of which, particularly of the latter, are in an advanced state of decay. How far, then, would the pittance named go towards the repair of so great a number of works, with so many of them in urgent need of repair? Is it not sheer mockery to attempt to meet so grave and so growing an exigency with means so inadequate? It seems simply to be done, that government may have such an item of expenditure on its books, to parade before the faces of those at home, who are curious enough to inquire into the manners and purpose of its financial administration: just as it keeps a department on foot here, called the Road and Tank Department; but whose designation, as regards tanks, is a gross misnomer, and which, in view of all the good it does in any direction, might as well be altogether a myth.

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Statement of Sums expended in the Dharwar Collectorate in constructing Water, from 1st May 1841 to same date 1851, the amount con

No.	Names of Talooks.		1840 41.	1841-42.	1842-43.	1843-44.	1844-45.
1.	2.		3.	4.	5.	6.	7.
			R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
1	Dharwar .	Government	. . .	86 15 3	. . .	194 1 0	415 14 6
		Villagers .	. . .	. . .	. . .	. . .	100 0 0
2	Nowlgoond	Government	. . .	41 4 0	. . .	. . .	150 0 0
		Villagers .	. . .	41 4 0	. . .	. . .	83 0 0
3	Dumbul	Government	. . .	. . .	. . .	. . .	250 0 0
		Villagers .	. . .	. . .	. . .	. . .	220 0 0
4	Bunkapoor	Government	11 5 9	711 4 9	7,496 7 9	2,148 11 9	300 14 2
		Villagers .	. . .	540 0 0	2,106 8 0	2,000 3 0	127 5 3
5	Hangul .	Government	. . .	5,463 10 3	1,420 0 0	1,991 3 7	1,233 12 8
		Villagers .	. . .	150 0 0	. . .	1,224 5 8	550 8 9
6	Hooblee .	Government	. . .	1,021 8 7	2,912 12 4	911 15 1	334 2 6
		Villagers .	. . .	388 0 0	134 0 0	170 0 0	200 0 0
7	Raneebed-noor .	Government	. . .	113 15 8	. . .	1,173 0 0	1,317 0 0
		Villagers .	. . .	. . .	. . .	251 0 0	723 0 0
8	Kode . .	Government	. . .	224 8 0	. . .	2,208 0 0	809 2 2
		Villagers .	. . .	14 12 0	. . .	363 0 0	328 6 8
	Total		11 5 9	8,797 2 6	14,069 12 1	12,635 8 1	7,143 2 8

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nd repairing Tanks, Reservoirs, Wells, &c. for Irrigation and Drinking
ributed by Inhabitants and Government respectively being shown.

1845-46.	1846-47.	1847-48.	1848-49.	1849-50.	1850-51.	Total.
8.	9.	10.	11.	12.	13	14.
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
145 15 1	21 11 3	...	484 6 4	424 0 0	2,142 13 4	3,915 12 9
...	...	...	252 14 0	199 10 2	1,523 1 9	2,075 9 11
						5,991 6 8
6,022 1 11	8,040 1 3	12,791 7 7	10 0 0	...	9,864 12 2	36,919 10 11
1,814 14 3	2,532 11 0	1,050 0 0	...	...	6,017 6 0	11,539 3 3
						48,458 14 2
351 10 8	500 0 0	201 7 4	399 14 10	...	1,945 7 0	3,648 7 10
200 0 0	...	225 0 0	400 0 0	...	2,303 8 0	3,348 8 0
						6,996 15 10
745 8 6	108 7 7	469 3 0	106 10 8	606 7 4	4,262 14 3	16,967 15 6
...	36 2 0	36 12 10	213 5 4	366 12 0	2,334 13 9	7,761 14 2
						24,729 13 8
263 15 5	120 0 0	707 8 5	893 1 4	541 8 7	12,187 3 11	24,822 0 2
50 0 0	60 0 0	599 13 4	350 9 10	404 0 1	6,970 6 4	10,359 12 0
						35,181 12 2
679 2 6	1,137 8 11	1,225 4 7	453 0 0	906 6 8	5,513 13 2	15,095 10 4
276 0 0	550 13 9	501 8 0	340 0 0	314 8 0	2,527 12 0	5,402 9 9
						20,498 4 1
...	...	...	100 0 0	...	1,569 0 0	4,272 15 8
...	...	...	100 0 0	...	786 0 0	1,860 0 0
						6,132 15 8
3,120 1 1	543 14 8	...	281 4 0	1,220 9 3	27,483 14 3	35,891 5 5
881 12 0	425 0 0	...	130 0 0	733 7 0	10,342 0 6	13,218 6 2
						49,109 11 7
14,551 1 5	14,076 6 5	17,808 1 1	4,515 2 4	5,717 5 1	97,774 14 5	1,97,099 13 10
					Government	1,41,533 14 7
					Villagers .	55,565 15 3

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As I am now dealing with the subject of irrigation, and as wells and tanks are not *exclusively used* for that purpose, but partly, and indeed chiefly, for *drinking, washing*, and *other purposes*, it is important to keep this distinction in view, as it by no means follows that money expended on the repair of tanks and wells is applied to the purposes of *irrigation*. The first expenditure is necessarily upon works of prime necessity, viz. wells and tanks used for drinking and other ordinary village purposes; so that the sums applied, when small, are scarcely likely to reach works designed for other purposes. The pitiful appropriation just alluded to does not suffice to keep works used for drinking purposes in adequate repair, so that it *cannot be regarded as an expenditure towards the promotion of irrigation at all.*

Contrast the sum thus expended with the cost incurred in the collection of the revenue. For the year 1849-50 the cost of collection amounted to 2,82,508 rupees, the revenue collected, including this sum, being 8,04,671 rupees; so that the cost of collection was about 35 per cent of the gross sum collected. Whilst the cost of collection was thus 35*l.* out of every 100*l.* collected, 4*s.* out of every 100*l.* was all that was devoted to the repair of tanks and wells; and, as already said, none of this can properly be said to have been applied to *works of irrigation.*

In Dharwar things wear a somewhat more wholesome aspect in this respect, as the preceding statement will show.

From this it appears that the average annual expenditure has fallen but little short of 20,000 rupees, of which the ryots themselves have contributed more than one-third, the average expenditure by government for each year of the period having been but a little upwards of 14,000 rupees.

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The average land revenue of the collectorate realised for the same period has been, in round numbers, about 10½ lacs; so that the proportion spent on tanks and wells has been about 1½ per cent of the receipts from the land, part of which expenditure has been laid out on works used for irrigation. Here we have an expenditure more than six times as great in proportion to receipts as that in Poona.

Let us now see how Belgaum has fared. The following brief statement exhibits the sums actually expended upon tanks and wells in the collectorates during the five years ending 1850-51:

Year.		Tanks.				Wells.		
1846-47	. .	783	5	3	. .	300	8	6
1847-48	. .	689	4	2	. .	331	14	10
1848-49	. .	464	0	9	. .	189	10	0
1849-50	. .	256	1	0	. .	270	0	0
1850-51	. .	465	6	3	. .	60	15	1
Total	. .	2658	1	5	. .	1153	0	5
						2658	1	5
Total for both	. . . .				.	3811	1	10
Average	. . . . .				.	762	3	10

During these years, the land revenue, as realised, has averaged about 12½ lacs; so that the average expenditure for the purposes in question fell short of the *sixteenth part of one per cent*, or about 1*s.* 2½*d.* out of every 100*l.* of land revenue,—a proportion so infinitesimally small as to require the powers of a microscopic arithmetic to estimate it. I am informed, however, that sanction was given in 1850-51 to a further outlay of 7500 rupees, which sum is now in process of expenditure. But it does not

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follow that this sum will all be expended within the year, nor has any information reached me of how many years its expenditure is likely to embrace. At the average rate of expenditure for the previous five years, it will last at least till 1860.

The case of Belgaum affords a striking specimen of the inertness which sometimes characterises the conduct of government, even when it has to deal with an independent and intelligent collector, who actively and perseveringly endeavours to quicken it to a sense of its obligations. Mr. Reeves, who for many years acted as collector, is now on his way to England to recruit his health. According to the rules of the service, he has been obliged to vacate his appointment. His departure is a loss to the collectorate which it will not be easy to repair.

On applying to the collector of Sholapore for a statement of the sums expended by government on tanks and wells, during the last five years, in his collectorate, the answer I received was, "Nothing from government." Brief, but instructive: especially when we consider that portions of Sholapore frequently suffer greatly from drought, the revenue suffering in consequence; that there are 169 tanks and 10,666 wells in the collectorate, of which 9 tanks and 6844 wells are partly applied to the purposes of irrigation; that these tanks and wells are as much in need of repair as any in the neighbouring districts; and that the Sholapore ryots are, as regards means, somewhat below those of Dharwar and Belgaum, being more on a level with those of Poona and Ahmednuggur. Indeed, judging from the portion of Sholapore which I visited, that abutting upon the Bejapoor district of Sattara, there are few parts of the Deccan more in want of aid for the repair of dilapidated but necessary works.

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We have thus seen that the proportion of expenditure in this respect to income derived from land is,

In Poona, $\frac{1}{8}$ of 1 per cent.
" Dharwar, $1\frac{1}{3}$ per cent.
" Belgaum, $\frac{1}{16}$ of 1 per cent.
" Sholapore, *nil.*

being an average per-centage of about *two-fifths of one per cent* upon the whole, or about 8*s.* out of every 100*l.* But this is only comparing the expenditure for such purposes with the *land* revenue. The average aggregate amount realisable in the four collectorates, from *all sources of revenue,* is about $46\frac{1}{2}$ lacs, after deducting remissions; of which the aggregate expenditure will be but a trifle more than one-third of one per cent, or a little over 6*s.* 8*d.* out of every 100*l.*,—being about the same proportion as is borne by expenditure for the same purposes to income in Guzerat. Whenever, therefore, the praises of the Indian government are sounded in respect of its vast sacrifices in behalf of irrigation, let it not be forgotten that about 6*s.* 8*d.* out of every 100*l.* collected is about the limit of that sacrifice throughout *the whole of Guzerat and the four collectorates of the Deccan alluded to;* the whole stretching in an almost unbroken line from Ahmedabad to the frontier of Madras, comprising an area of 29,326 square miles, and yielding an annual revenue of upwards of 1,100,000*l.*

It must also be borne in mind, that it is but a portion of this wretched pittance that is actually applied to the purposes either of repair or construction, the rest going to pay for engineering and superintendence, both of which are rather expensive here, although the latter is *nominally* cheap. The engineering and superintendence expenses attending the expenditure of a small sum are about as great

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as those incurred in laying out a comparatively large one. Indeed, in the course of one year, from the diminution in the gross sum expended by the road and tank department, the portion absorbed in engineering expenses rose from 45 to 68 per cent. It is, therefore, very desirable that, when an expensive system of engineering and superintendence is set in motion, the sums expended should be such as will truly meet the wants of the country, and render the expense of their application to these wants proportionately small. There is another circumstance which goes still further to lessen the real efficiency of the paltry sums shown to be appropriated for the repair and construction of the works in question. From the want of a properly organised and responsible department of public works, and of a regular and systematic course of procedure to ascertain both the necessities of the different districts and the most efficient modes of meeting them, works are frequently undertaken on the suggestion of this, that, or the other civilian: some of whose suggestions, based, as they are, upon a thorough knowledge of local circumstances, are exceedingly valuable; whilst others are made hastily, and perhaps at the instigation of parties more interested than the public in having them carried out. The consequence is, that it sometimes happens that works, when completed, fail to fulfil the expectations formed of them; and that others are abandoned before completion, on a discovery of their inutility. Thus, trifling and contemptible as are the sums which are appropriated, they are neither efficiently nor economically administered. Is it to be wondered at, that, under these circumstances, with the exception of the districts stimulated somewhat into activity by the ameliorating influences of the new survey, the whole of the country alluded to, stretching from the Sabermuttee to the Toombuddra,

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whilst replete with so many evidences of retrogression, should exhibit so few signs of improvement?

For so unaccountable an apathy to its own and the country's obvious interests, government has not even the undignified plea of ignorance to prefer. Scarcely had the Deccan fallen into our hands, when the question of irrigation was agitated in respect to it. Information respecting the practice of the former government, and the present condition, in respect to irrigation, of the presidency, was called for, obtained, and forwarded. This voluminous information, coming from various quarters, and, of course, greatly varying in its character, was collated, sifted, analysed, and compared, and various resolutions taken respecting it. And what has been the consequence? Beyond the extension of the correspondence to nearly a quarter of a century, scarcely any result, certainly very little of a practical character, has been attained.

This unsatisfactory conclusion to so extensive and promising an inquiry cannot be traced to any want of suggestion on the part of those whose aid was invoked. The practice of the Mahratta government in the different parts of the presidency was ascertained as accurately as possible, and suggestions made based upon it. It was generally found that, under native rule, the practice had been, to leave the digging and repair of wells entirely to private enterprise. But as to the construction and maintenance of tanks, and other works of similar proportions, it was otherwise, government lending its aid or encouragement in some shape or other; except when the repairs required were of a trifling nature, not affecting the safety of the work, when their execution devolved exclusively upon the villagers. Suggestions based upon these practices poured in upon government, and various were the plans proposed. On one point there was a singular unanimity of opinion, viz. that it was absolutely necessary

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that something should be done, and that *government was the party to do it,* or at least to initiate it. Where else under the sun, but in India, could such a hubbub be raised on any point, and nothing come of it after all? That nothing has come of it will be inferred from what has preceded; for, with the single exception of Dharwar, where, with the aid of the ryots to the extent of upwards of half a lac of rupees, the expenditure during the last ten years has, to some little extent, reached works of irrigation, it has, in scarcely any other part of the section of the presidency with which I have been dealing, extended beyond works used for drinking and ordinary village purposes. Here and there, as in Kaira, we may meet with solitary instances of a little money having, at long intervals, been applied to works of irrigation; but the rule has been neglect, and such rare exceptions affect only to illustrate it.

I am not here unmindful that, in 1844, government promulgated a set of rules for the encouragement of the ryots in digging and maintaining wells. To these I adverted when dealing with the subject of irrigation in Guzerat, as I did also to the causes of their having become and remained a dead letter.

The first of these rules, which gives to the man who sinks a well a lease of the land irrigated by it, to be held by him for thirty years at the same rent as is usually paid on unirrigated land, is more calculated to work well in those parts of the Deccan into which the new survey has been introduced than in the rest of the Deccan or in Guzerat. A fixed tenure, fixed as regards both *rent* and time, is indispensable to induce men to lay out money, to any extent, upon land. To hold the irrigated land at the same rent as dry land is held upon, is to hold it at *no fixed rent at all,* in districts where the rent upon the dry land is liable at any time to fluctuation. Such is the case in Gu-

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zerat and in the unsurveyed portions of the Deccan. It is otherwise, however, in the surveyed parts of the Deccan, where the rent upon all lands is fixed for thirty years. There, if a man digs a well, he knows precisely at what rent he will hold the improved land until the *expiration of the term for which the rent is fixed.* Thus if he dig the well at the commencement of the term, he knows at what rent he will hold the improved land for the whole period of thirty years. But this is a coincidence rarely likely to happen. Suppose him to desire to dig the well after half his term has expired, he will then only know the rent at which he can hold the improved land, to a certainty, for only fifteen years. Beyond that, he cannot tell what may be the *new rate* upon dry-crop land. Should that new rate be an advance upon the old one, the rent upon his improved land will advance with it, just as it would with every advance in the rent on dry land in Guzerat. It thus appears that, even in the surveyed districts, it is only in the event of a rare coincidence, that a ryot with the requisite capital would have the full measure of inducement held out to him to invest it in such a manner. In all other cases, the inducement would be less and less, according as the time shortened for which the rent was absolutely fixed.

It is very evident, then, that if government is really anxious to do any thing effectual for the promotion of irrigation, it must cease to place much reliance upon the efficacy of such regulations as these.

If the hand of government is but little visible in what has been done for irrigation in the hilly or wet districts, it is still less so in those broad plains to the eastward, the climate of which is comparatively dry. Here, indeed, it would be difficult, so far as works of improvement of any kind are concerned, to find any traces whatever of the ex-

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istence of a government; although this is the part of the Deccan which, for more reasons than one, is most in need of the aid and intervention of government. The supplies of rain are not only too scanty for irrigated culture, but frequently even too much so for ordinary dry-crop farming. Last September, I saw in many places the country covered, as far as the eye could reach on all sides, with crops of jowaree, baijaree, gram, and other produce; all of which had been healthy and vigorous a few weeks before, but which then, from want of moisture, looked sickly and drooping. In these places, another week's drought would have destroyed the whole crop; a calamity only averted by the detached showers which, a few days afterwards, reached the district from the Madras monsoon. As these showers are not general, there is scarcely a year in which some districts in this part of the country do not suffer from the scarcity of rain. The collectors' reports from Ahmednuggur, Poona, Sholapore, Belgaum, and Dharwar, contain amongst them an instructive lesson on this head. However they may vary in other particulars, they have for many years back been fraught with the same story of remissions rendered necessary by the failure of crops from the want of rain. Whilst this is the case, the nature of the country, and the distribution of water over its surface, are such as peculiarly call for the intervention of government to remedy the evil. Unlike the hilly country, it is intersected by but few, and these large streams. This, taken in connexion with the scanty amount of rain which falls, renders it impossible to cover its surface with a multitude of small works like tanks; at the same time that, even if they existed, they could not be so easily or so effectually turned to account as in the more uneven tracts to the west. Irrigation, if carried on at all, can only be efficiently carried on in this district by means of extensive and costly

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works, such as government alone can construct. Large bunds must be formed, by damming up the streams by means of dams of solid mason-work. The accumulated waters thus secured would be found amply sufficient for the supply of extensive tracts, through which it might be led by proper channels and watercourses. The great valley of the Krishna offers many opportunities for the construction of such works. At Kurar the river falls over a ledge of rocks several feet in height, which would form an admirable site for a bund, from which the country on the left bank of the river could be irrigated to any extent for many miles down. Some distance lower down the river, and about twelve miles to the west of Kolar, where the road from Kulladghee to Beejapoor crosses the Krishna, it takes a large bend to the southward, at the most southerly point of which is a place called Gulgullee. Here another bund might be formed, from which the valley on the south bank of the stream might be irrigated to an extent to which the supply of water alone need set any limit. I only mention these as instances of what might be done, not only along the line of the Krishna, but likewise along those of its larger tributaries. If government has any doubt as to the practicability of constructing such works, they may be removed by observing what has been done by a *native government* still lower down the valley, where the waters of the Toombuddra, second in volume only to the Krishna itself, have been arrested by dams of ponderous mason-work; the supplies of water thus obtained being distributed over a large tract of country, the productive powers of which have been thereby greatly enhanced.

Whatever may be done in future to enforce the obligations of government in this respect, remains to be seen; the manner in which they have heretofore been fulfilled in

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the Deccan and southern Mahratta country, I leave you to infer from what has preceded. From Ahmedabad to Turrus, from the Sabermuttee to the Warna, the story is the same,—a story of uniform indifference and stupendous neglect. "We have, in reality, done nothing for irrigation in this presidency," is the language of one high in office here, who has had the frankness to express an honest opinion. The merest driblets have been permitted to flow from the public treasury towards the different collectorates, to keep from utter dilapidation works absolutely indispensable to life, viz. such tanks and wells as are required for ordinary village purposes; but it is in vain that we seek for any traces of improvement as regards works of irrigation, arising from appropriations on the part of government. When, therefore, the proceedings at the mouth of the Godavery are paraded before the public, let them not be pushed so near the vision as to exclude the rest of India from the view; and when, on the ground of what is being done in selected spots, the Indian government demands from parliament a receipt in full of all legitimate claims against it on this head, let its account with Western India on the same score be audited ere the request be granted. So far, then, as the Bombay presidency is concerned, it is impossible to escape the conviction, that government, whilst it uses without scruple all its powers to enforce its *rights* as a *landlord*, has been uniformly and notoriously negligent of its plainest *duties* as such.

THE END.

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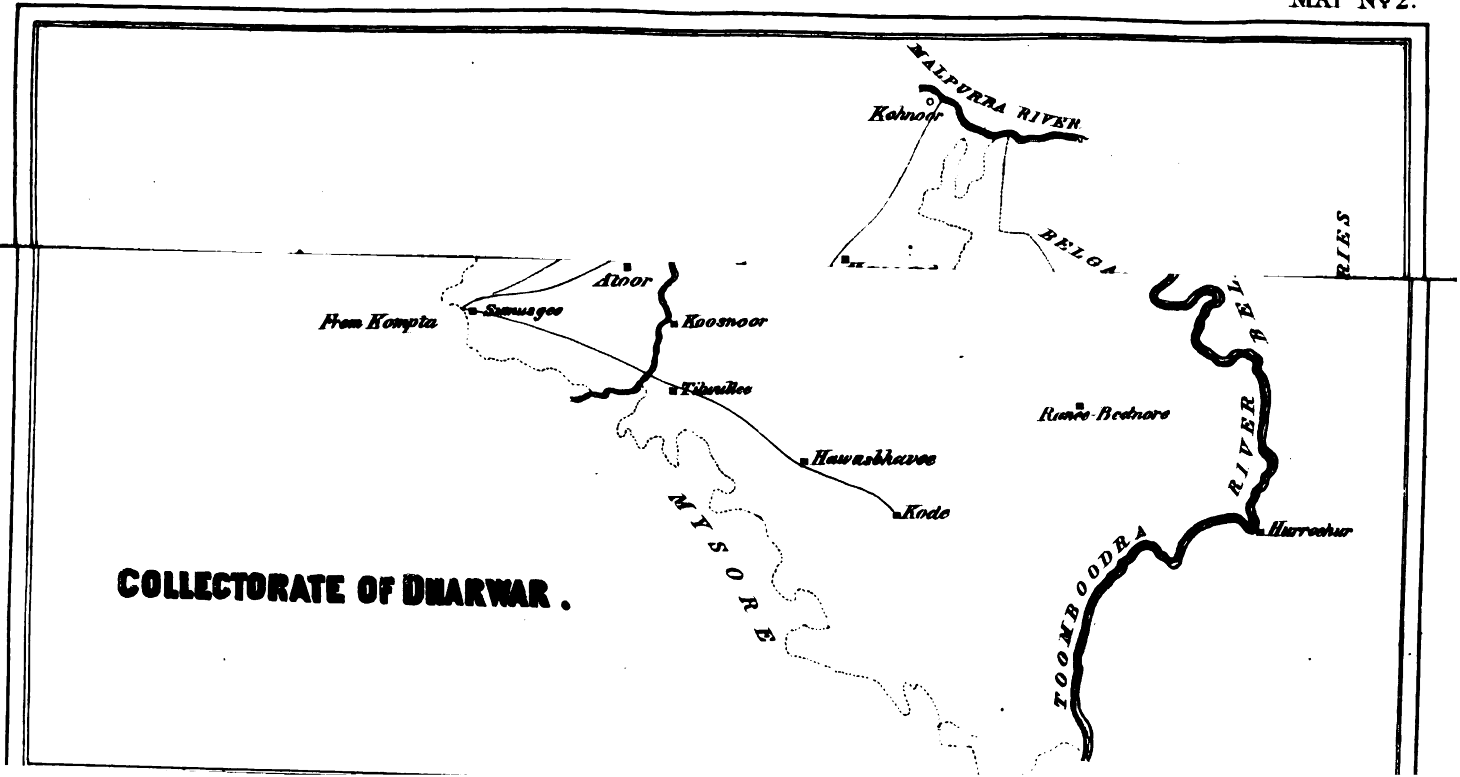
MAP No 2.



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